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I, Dmytro Poznyak , hereby submit this original work as part of the requirements for the degree of Doctor of Philosophy in Political Science.

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The American Attitude: Priming Issue Agendas and Longitudinal Dynamic of Political Trust

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THE AMERICAN ATTITUDE:
PRIMING ISSUE AGENDAS AND LONGITUDINAL DYNAMIC OF POLITICAL TRUST

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by

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Abstract

For over fifty years the American National Election Studies (ANES) program has been measuring citizens' evaluations of the trustworthiness of the "government in Washington." The longitudinal dynamic of political trust attitude, suggests that in the last fifty years, Americans have generally become less positive and more critical towards the national government. This dissertation empirically explores the causes and consequences of changes in the level and components of political trust attitude over time.

This research challenges the prevalent idea that public trust in government shifts in response to the changes in government performance. Building on the scholarship of cognitively oriented public opinion scholars, I instead advocate the view that people judge about the trustworthiness of the "government in Washington" based on the problems they consider important at any given point in time—a process defined as cognitive priming.

The change in political trust is modeled using the ANES cross-sectional time-series (1964-2000) dataset augmented by the context level data, replicating the state of the national- and media agendas at the time of survey response. These contextual data include the macro-level measures of unemployment, inflation, consumer confidence, and the measures of media attention to the national economy and defense.

Results from the multilevel structural equation models (SEM) with Bayesian MCMC estimation method suggest that issue priming plays a key role in the longitudinal dynamic of trust.

First, I establish that priming occurs through the change in respondents' national importance judgments and economic evaluations. These mediators significantly carry the priming effect of mass media and real-world cues on political trust.

Second, I demonstrate that change in the volume of media attention to economic and international affairs and national defense issue domains increases the weight people place on these issues when making judgments about the trustworthiness of the national government. These priming effects, previously not examined on the time-series cross-sectional data, are remarkably robust over time.

Third, I show that the effect trust exerts on political attitudes and policy preferences in public also appears conditional on considerations people have in mind when they think about the trustworthiness of the government in Washington. This finding disconfirms the previous theory that shifts in political trust lead to the unconditional increase or decrease in public support for the wide array of the government policies.

Findings from this research suggest that the decline in trust—while not threatening the legitimacy of the American political system—nevertheless has a wide-range of policy implications. Its influence on the American public opinion also appears more multi-faceted and complex than it was considered before.

To my grandparents Vera and Nikolai—two most important predictors of my personality and the course of my life

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that what I was doing was not hopeless, and his great professional and personal attitude redefined for me what a service to the field really means. My perpetual Christmas wish will be to eventually work on a joint paper with Marc.

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The last but not the least, thanks to everyone who kept me motivated by asking "When are you going to defend?"

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CHAPTER 1

INTRODUCTION: POLITICAL TRUST IN THEORY AND REALITY

> Government is a trust, and the officers of the government are the trustees. And both the trust and the trustees are created for the benefit of the people.
>
> Henry Clay, in a speech in Lexington, May 16, 1829

> All power tends to corrupt and absolute power corrupts absolutely. Great men are almost always bad men, even when they exercise influence and not authority.
>
> John Dalberg-Acton, a letter to Mandell Creighton, April 5, 1887

Trust in democratic theories

Political culture of democracy is on the one hand a "culture of activism and trust; on the other, it is one of delegation and skepticism" (Cleary and Stokes 2006, 3). Indeed, throughout the history people viewed the government as both essential for the humankind, and as a Leviathan, which needs to be treated with suspicion (Oakeshott 1996). This ambivalence of views, Mansfield (2001, 359) argues, is immanent to the human nature as people are "caught between their fear and their need of a captain they can trust."

Two opposite views on the trust represent one of the oldest dilemmas in political theory. Proponents of the trusting view argue that public trust in their leaders is crucial for democracy to function as expected. This view can be traced in political thought of John Milton ([1650] 2004), social contract theory of Jean-Jacques Rousseau ([1742] 2008), and perhaps most importantly, in observations of the early American democracy made by Alexis de Tocqueville ([1835-1840] 2007). This so-called

Tocquevillian line of thought, was further advanced by the students of democratic theories in the 1960s (Dahl 1971; McClosky 1964; Neubauer 1967), who were generally proclaiming trust as an essential attribute of a democratic political culture (Parry, 1976). Dahl (1971) argued that democratic society is unlikely to emerge without political trust. Easton (1965; 1975) similarly believed that low political support calls into question the legitimacy of democratic regimes. This neo-Tocquevillian tradition continues itself through the social capital theory (Putnam 1995a), advocating the idea that the culture of democracy is or should be based on civic activism, reciprocity, and trust (Cleary and Stokes 2006, 8).

Many contemporary political scientists adopt a similar view about the importance of trust. Trust is essential for political leaders to make binding decisions, commit resources to attain societal goals (Gamson 1968), and secure citizen compliance without coercion (Barber 1983; Levi 1996; Tyler, Casper, and Fisher 1989). Hetherington (1998; 2005) shows that trust is a crucial component of public support for the various government policies. Absence of trust—Hetherington (1998) argues—makes it difficult for the government to succeed and address such key issues as social security, terrorism, and global warming, to mention but few.

The skeptical view—perhaps even more long-standing—argues that democracy functions best if the citizens are skeptical about their leaders (Cleary and Stokes 2006). One can trace this view back to Demosthenes as early as the 4th century BC. This view has become famous through the works of Niccolò Machiavelli, classical liberal ideas of René Descartes, John Locke and Thomas Paine, and later became a crucial part of the Anti-Federalists' political rhetoric in America (Vasquez 2006).

Following Machiavellian thought (Machiavelli [1531] 1984, Chapters 16; 18), this theory of liberal democracy assumes that those in power may abuse it and disfavor public interests, if left unconstrained (Hardin 1999; 2002). As Johnson (1993, 12) puts it, "those who are trusted may find that living up to it proves too burdensome. Those who trust may find themselves vulnerable to disappointment or betrayal." Skepticism and distrust serve, therefore, as additional institutional safeguards protecting people from the abuse of power from the government, even legitimately chosen (Ely 1980; Hardin 1999; 2002; 2006).

For the entire history of the United States from the Philadelphia Convention back in 1787 to the present-day Tea Party and Occupy Wall Street movements, the inherently American *pro democracy* and *anti-government* attitude has always stood apart (cf. Combs, 1993). According to Wills (2002, 15) "there is more to this attitude […], than the normal and universal resistance to authority. Americans believe that they have a government that is itself against government, that our Constitution is so distrustful of itself as to hamper itself."

Willis' (2002) comment must be put in a historic perspective. From the viewpoint of Lockean liberalism, United States was certainly created on the principle of distrust in government (cf. Hardin 2006, 140). As Lovejoy (1961) argues, when working on the American Constitution, Framers assumed a skeptical view of human nature and its inevitable corruptibility by power. Building upon Locke's institutional ideas, the Framers hence established a system of checks and balances to limit the possibilities for the "Leviathan on the Potomac"(Andrain and Smith 2006, 20).

However, even being skeptical about the trustworthiness of those in power, the Framers did not see distrust as a necessary constrain from the public side, for too much

skepticism about politics can lead to the complete detachment (Cleary and Susan Carol Stokes 2006b; Pettit 2003). Instead, they believed that by limiting the absolute power of the leaders, citizens would learn to trust their government (Andrain and Smith 2006, 20; Hamilton, Jay and Madison [1788] 1987, 122-128; 318-322)[1]. Therefore, republican theory viewed public trust as a function of "trust-responsiveness" of the policymakers—a mechanism of self-interest capable of reinforcing and reinvigorating the trustworthiness of politicians (Pettit 2003, 306).

The unique American system of checks and balances was purposefully designed to minimize the possibility to abuse the power and hence maximize the trustworthiness of the government. Madison in the 57th Federalist paper (Madison, Hamilton and Jay [1788] 1987, 227) mentioned that this system itself, as well as politicians' concern for the reelection—another important chain in the mechanism carefully crafted to increase the "trust-responsiveness" of the elected officials—should constrain the government to be trustworthy.

Thus, in republican theory, I would argue, neither trust nor distrust exists as an abstract concept separated from an "object of trust"—the *incumbent* government itself. Perhaps for the first time in the mankind history, the Framers expected that public would actually decide whether the government is or is not trustworthy by evaluating its overall performance. They viewed this attitude not as a fixed and unchanging *trusting* or *distrusting* predisposition. Instead, they considered trust to be constructed based on the public evaluation of the government performance in the relevant policy domains. I will show later how this early vision of trust had anticipated a much later view on the attitudes' construction in modern cognitive theories.

[1] Madison also believed that the federal government would be under such perfect popular control, that there would be no need for the people to choose between trust or distrust in relation to those in power

In my opinion, the understanding of political trust in the republican view puts it somewhere between two extreme views—trusting and distrusting—that coexist in political theory. Both trust and distrust hence become crucial for the democracy to function as expected, as in theory they serve the fine-tuned indicators of people's satisfaction with their government. In reality however, this indicator—at least the way it is operationalized by the American National Election Studies (ANES) project—may be out of tune. What many consider a barometer of the American democracy may in fact be a "part of syndrome of citizens' response to everything" (Stimson 2004, 153).

Trust in American political reality

If the students of democratic theories required an empirical support for their views, it would seem that both optimistic and skeptical theories would be equally sustainable on the American soil. Looking at the data collected in the United States over the last fifty years, one can hardly define the exact place trust holds and the role it plays in American politics. Instead, it may seem that the citizens themselves were setting up a lengthy experiment to test whether the government in Washington performs better when it is credited with or deprived of public trust (fig. 1.1).

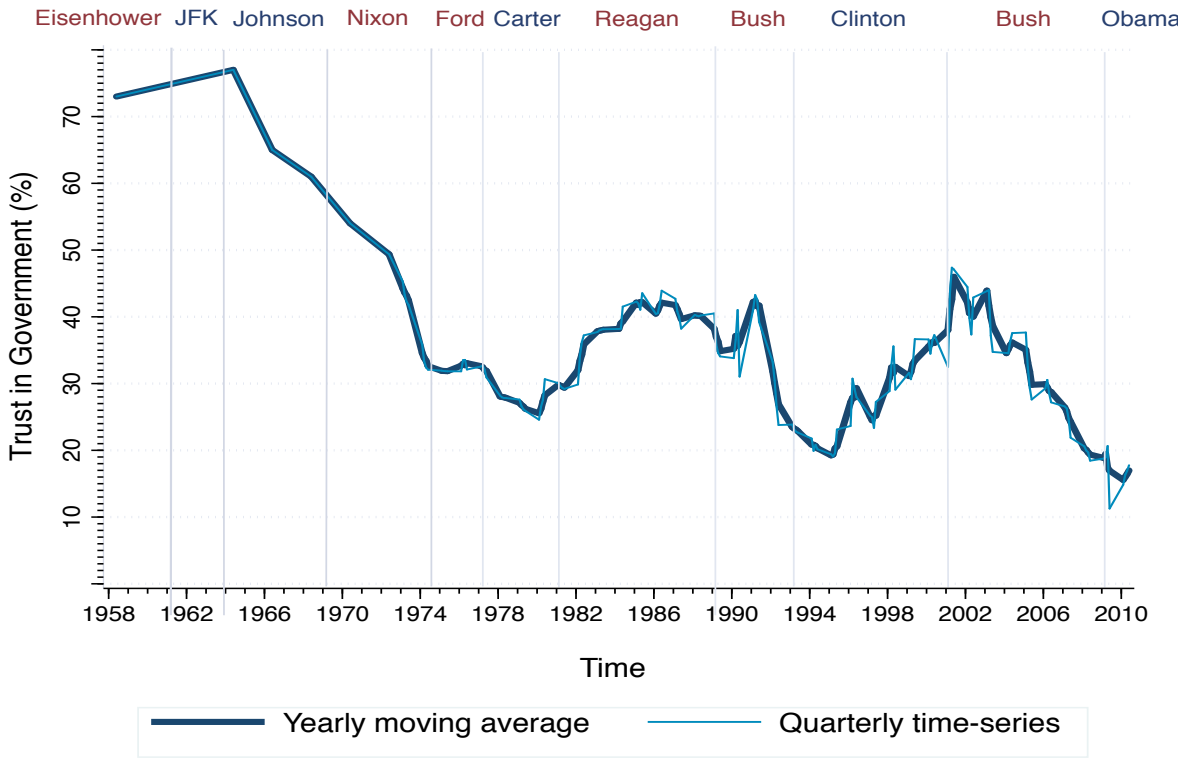

Figure 1.1. Changes in the level of public trust in government: 1958-2010

Response: Sum of the "Just about always" and "Most of the time" answers to the question: "How much of the time do you think you can trust the government in Washington to do what is right?" (ANES standard format; exact wording of questions asked in other surveys varies).

Source: The time-series is based on my reconstruction of survey marginals of the ANES, Gallup, CBS/New York Times, ABC/Washington Post, Pew Research Center, and CNN/Opinion Research Corporation surveys (1958–2010) obtained through the iPOLL Databank, Roper Center for Public Opinion Research, University of Connecticut (Appendix A). Time-series was constructed using Wcalc algorithm (Stimson 1999). The output of Stimson's Wcalc procedure is provided in Appendix B.

Notes: Quarterly measure of trust in government can only be reconstructed since 1972. ANES biannual measures are used from 1958 to 1971.

The time-series captures shifts in public judgments about the trustworthiness of the government since 1958, when the ANES project began its systematic measurement of political trust, and through the end of 2010. Without making an attempt to provide a comprehensive explanation of the changes in trust over time, it may be instructive to identify some key historical events associated with the ebbs and flows of public trust in government.

In the first decade after the ANES began its assessment of political trust, people were mostly approving and supportive of the national government. From 1958 and throughout 1964, over 70% of Americans trusted the government "to do what's right" either "just about always" or "most of the time." The first decline in public confidence in government began by 1966. Although empirical evidence is scant, the most plausible explanation for this decline was—as Hetherington (2005) argues—public dissatisfaction with an expending welfare state and persisting social problems. In the years that followed, an unpopular Vietnam War and growing civil rights' tensions sent trust in a freefall (cf. Miller 1974). After Watergate and Nixon's resignation, followed by public dissatisfaction with President Carter's job performance and stagflation of the late 1970s, political trust dropped to merely 25% at the end of the 1970s.

Public confidence in government began to rebound during the first tenure of President Reagan. Trust was relatively high throughout the 1980s, although the trend was punctured by the Iran-Contra scandal in 1986 (Chanley 2002). Trust surged in 1991 during the Gulf War but in a matter of months it began to decline in the wake of economic concerns in 1992 eventually leading to the failure of President Bush to get reelected to a second term.

By 1994 trust reached its then all-time minimum of 17%. This decline was arguably a response to several events: the House banking scandal, Clinton's failure to reform health care policy, and increasing partisan gridlock in Washington (Chanley 2002). After 1994, trust began an upward trend and continued to grow up until the end of Clinton's presidential tenure, notwithstanding the Lewinsky scandal and subsequent impeachment hearings.

Terrorist attacks of September 11 returned trust to the level not seen since the "Halcyon days" of the 1950s (Bishop 2005; Chanley 2002; Hetherington 2005). For the first time since 1968 public trust surpassed 60% in October 2001 (Gallup/CNN/USA Today Poll October 6, 2001). However, by the end of 2002, political trust was again regressing to its previous levels.

In the recent years trust in government—undermined among the rest by the economic recession, high unemployment and polarized Congress—was continuing to decline and hit its all-time low in October 2011. This time only 1 out of 10 Americans trusted the government "to do what's right" "most of the time" or "just about always"[2].

For public opinion research, the pattern of change in political trust in the last fifty years represents a two-fold problem. First, the long-term equilibrium of trust suggests a consistent but non-monotonous decline over time.[3] Second, the overall trend also shows substantial short-term "seasonal" fluctuations.

The long-term equilibrium of trust suggests that in the last fifty years, Americans have generally become less positive and more critical towards the national government. Proportion of the public trusting government, has declined from around 75% in 1958, when the American National Election Study (ANES) introduced the first empirical measure of political trust, to merely 15% in September 2011 (CNN/ORC Poll, September 23-25, 2011). As Orren (1997, 80) put a decade and a half earlier: "public sentiment had completely reversed itself in comparison with the halcyon 1950s." This statement was hardly an exaggeration in 1997, but by 2011 it was moreover true. This set of public mood demonstrates that most citizens are furthermore inclined to share

[2] NYT/CBS poll from October 21-24, 2011.

[3] This does not imply the linear pattern of decline. Instead, decline in trust followed a more complicated pattern, which could be explained with a higher-order polynomial trend.

Reagan's famous thesis that "government is not the solution to our problem; government is the problem" (Reagan 1981).

Recent surveys reinforce this view. According to the April 2010 Pew survey, most Americans believed that government's priorities are misguided (62%), that government policies do too little for average Americans (56%), and that the government itself is too big and powerful (52%). Nearly half of all respondents (47%) urged for cutting back or reducing the power of the federal government in Washington (Kohut et al. 2010).

While the overall decline in political trust has been troublesome, public opinion researchers have been even more puzzled by the short-term ebbs and flows of trust. Why does political trust shift so abruptly in a matter of months, weeks or sometimes even days? Which intervening shocks—using the time-series terminology—could explain these abrupt changes?

Republican theory would point us at the change in the government's performance as a possible cause. However, it is hard to imagine that performance could decline and rebound itself in such short periods. Building on the scholarship of cognitively-oriented public opinion researchers (cf. Bishop 2005; Krosnick, Judd, and Wittenbrink 2005; Tourangeau and Rasinski 1988; Tourangeau, Schwarz, 2007; Schwarz and Bohner 2001; Singer, and Presser 2003) I argue throughout this text that trust changes so abruptly because it on the contrary does not reflect any systematic characteristic of the government itself. I agree with Bishop (2005, 128) that public confidence in government "is not about just the institution of government in general." I build upon this understanding of trust and advocate the idea that people judge about the

trustworthiness of the "government in Washington" based on the problems they believe are important at any given point in time—a process defined as cognitive priming.

In this dissertation I provide a detailed account of causes and consequences of shifts in public judgments about the trustworthiness of the government. I will commit to answer three broad questions, which have not been fully addressed in political trust literature: *how political trust attitude priming occur*s; *when it occurs*, and, *what are the consequences of trust attitude priming.*

Throughout this text I will argue against the pessimistic view that declining political trust undermines systemic institutional support and legitimacy of the American national government (see e.g. Putnam 1995; 1995; Sztompka 1999). On the contrary, I will show that the ANES measure of political trust should not be treated as a barometer of American democracy. Paraphrasing Stimson (Stimson 2004, 153; italics added) people's judgments about the trustworthiness of the government are "a part of a syndrome of *citizen response to everything,*" that has little to do with specific acts of the government itself. However, irrespective of what causes the dynamics of political trust over time, the change in people's trusting attitude to the government—as I will also demonstrate—has important consequences for political attitudes and policy preferences in the mass public, which political trust shapes.

Structure of the dissertation

This dissertation consists of the three parts, dedicated to three key areas of political trust research: *theories* of political trust, *measurement* of political trust attitude, and *empirical models* explaining the change in trust over time and the effect of trust on related political attitudes and policy preferences.

The *theoretical part* consists of the four chapters. *Chapter two* begins with the definitions of political trust. I start by reviewing the origins of the concept and discuss the early views on trust in government in political theory. I review the meaning of related political attitudes, such as cynicism, powerlessness and alienation, and discuss their conceptual and empirical differences from trust. In *Chapter three* I discuss the major theories explaining the change in trust in government over time. I focus on the three major theories of trust: cultural change, government performance and media malaise. *Chapter four* offers substantive critique of traditional explanations of the decline in trust and suggests a cognitive theoretical framework, which provides an alternative explanation to the attitude change. *Chapter five* lays out research hypotheses for the further analysis and discusses research design.

The *measurement part* includes two chapters. In *chapter six,* I review existing survey approaches to measure political trust, such as the ANES Trust-In-Government scale and its modifications, Harris/NORC GSS Trust scale and Gallup/ORC scale. *Chapter seven* is dedicated to the psychometric properties of the ANES trust scale. In this chapter I test the measurement invariance hypothesis of the latent trust construct, which is an important prerequisite for the time-series cross-sectional analysis.

The third structural part—the *models*—includes three chapters. *Chapter eight* explores how trust attitude priming occurs. In this chapter I test the hypothesis that the national importance judgments mediate the effect of the priming issue agendas on political trust. In *chapter nine,* I focus on the circumstances, under which trust attitude priming occurs. Here I focus on the moderation hypothesis and show that people place more weight on the issue domains primed in the media when they judge about the trustworthiness of the national government. In *chapter ten* I turn to the consequences

of changes in political trust over time. By putting political trust on the right-hand side of the equations, I show how shifts in the issue domain salience condition the effect of trust on political attitudes and policy preferences, which political trust shapes.

I summarize my findings, discuss limitations and suggest directions for further research in the *Conclusions'* section.

PART I

THEORIES

CHAPTER 2

THE CONCEPT AND DEFINITION OF TRUST

> "My view of government places trust not in one person or one party, but in those values that transcend persons and parties. The trust is where it belongs—in the people. The responsibility to live up to that trust is where it belongs, in their elected leaders. That kind of relationship, between the people and their elected leaders, is a special kind of compact; an agreement among themselves to build a community and abide by its laws."
>
> Ronald Reagan
> Inaugural Address, January 20, 1981

The first step to understand the concept of trust is to define what it is. Because the term is loosely defined in the literature, it is equally important to understand what trust is not. In this chapter, I further elaborate on the concept of political trust[4] and offer its definition by summarizing the views existing in the literature. Next, I review the meaning of related political attitudes such as cynicism, powerlessness and alienation, and discuss how they differ from political trust.

What is Political Trust?

According to Easton (1965; 1975), legitimacy of political system depends on the extent to which the electorate trusts the government to do what is right most of the time. While some may find this claim too strong (cf. Citrin 1974), scholars usually agree that trust is a key ingredient of a stable democracy (Almond and Verba [1963] 1989; Gamson 1968; Hardin 2006; Hetherington 1998; Johnson 2005; Mishler and Rose 1997; 2001; Warren 1999).

This unity splits up when it comes to the definition of trust (Ludwig 2005; Newton 2001). Despite of extensive research, there is no generally accepted definition of trust in social and political sciences (Abramson and Finifter 1981; Castelfranchi and

[4] I will be using the terms *trust in government, political trust* and *confidence* interchangeably throughout the text

Falcone; Citrin and Muste 1999; Hetherington 1996; Levi and Stoker 2000; Ludwig 2005; Newton 2001a). As Hetherington (2006) puts it, political trust is a concept that people think they understand well until they are asked to define it.

The ambiguity of definitions comes from the fact that "trust is not only a concept of its own right, but it has many synonyms and terms that are closely related but not identical" (Newton 2001, 3). Indeed, scholars often use the term interchangeably with confidence, legitimacy, support, loyalty, skepticism, cynicism, powerlessness—also referred to as inefficacy or political futility—and alienation, to mention but few (cf. Cook and Gronke 2005; Krouwel and Abts 2007; Ludwig 2005; Reef and Knoke). Newton (2001) relates political trust to political capital, thus adding to it another dimension of related concepts, like civic conscience, civic duty, citizenship, and political tolerance.

To complicate matters further, it is also not entirely clear what trust actually is from a psychological standpoint (Nannestad 2008). It is defined as an attitude (Castelfranchi and Falcone 2010; Citrin and Muste 1999; Jones 1996; Lahno 2001); a general outlook acquired through socialization (Uslaner 2002); a reflected and internalized interest of the others—an "encapsulated interest" (Hardin 2006, 68; 2004); a relationship between two actors (Farrell 2004; Hardin 1999; Hardin 2004; Hardin 2006; Hardin 2009); a part of political capital (Newton 2001a; 2001b); an expectation (Gambetta 2000; Luhmann 1979); a norm-driven "moralistic" action (Elgesem 2006); a decision (Bohnet and Zeckhauser 2004); a rational calculation (Deutsch 1958; Riker 1980), to mention but few.

Given the existing ambiguity of definitions, it might be equally important to define what trust *is* and what it *is not*. I begin by discussing the existing views on political trust.

The origins of the concept and early views on trust. Contemporary political trust research generally stems from the earlier studies on political alienation, which began in the 1960s (Levi and Stoker 2000). Three early scholarships have largely framed later views on trust: Easton's (1965) 'A Systems Analysis of Political Life', Gamson's (1968) 'Power and Discontent', and Almond and Verba's (1963) 'The Civic Culture: Political Attitudes and Democracy in Five Nations' (cf. Levi and Stoker 2000).[5]

Of all three studies, Easton's (1965) scholarship had the most profound effect on later research. Ironically, Easton's conceptualization also led to an intense academic clash concerning the meaning and measurement of the ANES Trust in Government scale.[6]

In his original work Easton did not use the term *'trust'*. Instead, he introduced *'political support'* concept and defined it as an "attitude by which a person orients himself to an object either favorably or unfavorably, positively or negatively." (Easton 1975, 436) Easton further distinguished between *specific*- and *diffuse support* of the government.

Specific support refers to people's satisfaction with the outcomes of the incumbent administration and taps "the satisfactions that members of a system feel they obtain from the perceived outputs and performance of the political authorities" (Ibid. 437). Thus, specific support is more volatile, being largely a result of incumbent government performance: "is a response to the authorities (…); it is directed to the perceived decisions, policies, actions, utterances or the general style of these

[5] For some earlier views on trust in political context see also Deutsch (1958) "Trust and Suspicion" and Riker (1962) "A Theory of Political Coalition."

[6] There is no standard approach to refer to the scale in the literature. It is often referred to as the "Trust in Government scale" (Citrin 1974; Citrin and Muste 1999), "trust-in-government scale" (Cook and Gronke 2005) and "trust in government scale" (Erber and Lau 1990). Following the psychometric tradition, I will use capitalization when referring to the actual scale, and will use the lower case when referring to the concept of trust.

authorities" (Easton 1975, 437-38). For this support to develop, people need to feel that fulfillment of their needs is associated with the authorities (Ibid.).

Diffuse support on the contrary, taps people's generalized attitudes and attachments towards political regime in general, irrespective of government performance. It refers to what a political object means for the people rather than what it does (Anderson 2002). Easton (1965, 273) defines diffuse support as the "reservoir of favorable attitudes or good will that helps members to accept or tolerate outputs to which they are opposed or the effect of which they see as damaging to their wants." When the supply in the reservoir is high, the authorities can make new commitments and if successful, further increase their support. If the supply is low and declining, authorities may face difficulties to govern effectively (Gamson 1968, 45-6).

Specific support is thus necessary to maintain an administration in power; diffuse support is needed to uphold a political system in general (Anderson 2002). Easton's (1965; 1975) understanding of trust is more consistent with diffuse rather than specific support. He views trust as individual's feeling that regime would provide favorable outcomes even in cases of low or absent scrutiny. From here, he considers trust to be a long-lasting feeling of attachment to the political system, rather than an outcome of incumbent government performance (Segovia 2008).

Recent scholarship argues that it is not the theoretical difference between the diffuse and specific support, but rather the empirical distinction of the *object* to which support is directed that matters most (Hetherington 1997; 1998). Indeed, from psychological standpoint, an attitude cannot exist in isolation from the object. By definition, it is focused on a particular entity or object, rather than all objects and situations (Eagly and Chaiken, 1993). Easton (1965) also touches upon the objects of

political support. He suggests three foci of support, i.e. the authorities, regime, and political community. Each of these objects has an increasing level of inclusiveness. Support for political community is defined as the basic attachment to the nation; support for the regime, is understood as the set of principles by which the decisions of government are guided and justified; and authorities are the current incumbents (Easton 1965; Gamson 1968). The relationship between the objects, types and sources of support in Easton's (1965) typology is summarized in table 2.1.

Table 2.1. Easton's (1965) typology of political support

Types of support	**Sources of support**	**Objects of support**		
		Political Community	Political Regime	Political Authorities
Diffuse support	Values and norms	Identification with community	Legitimacy of the regime	Legitimacy of the authorities
	Generalized long-term benefit	—	Trust in regime	Trust in authorities
Specific support	Short-term benefit	—	—	Satisfaction with day-to-day output

Source: Thomassen and van der Kolk (2009)

In *'Power and Discontent',* Gamson (1968) laid out theoretical underpinnings of political trust as a necessary condition of a democracy (Hardin 2006). His study provided an important theoretical foundation for the survey research work on trust (Riker 1980), and was also the first to view trust as a political attitude. Gamson defined trust as the "probability, P_b, that the political system (or some part of it) will produce preferred outcomes even if it left untended." While recognizing a continuity of the trust

scale, Gamson (1968) particularly focuses on three key points on this scale: confidence (P_b = 1.0), neutrality (P_b = 0.5), and alienation (P_b = 0). Gamson defined confidence as people's belief that political institutions produce favorable decisions regardless of particular incumbents. Neutrality implies that authorities are viewed as moderately competent and efficient in achieving collective goals, but they offer no special leadership skills. Finally, alienation indicates that the authorities are regarded as inefficient and incompetent in achieving collective goals and biased against the people in handling conflicts of interests (Ibid., 54-6). Gamson (1968, 43) argued that the loss of public trust in government "is the loss of system power, the loss of a generalized capacity for authorities to commit resources to attain collective goals."

In *'The Civic Culture',* Almond and Verba ([1963]; 1989) developed the idea that democracy is sustained by what they called *'political culture'*—a set of attitudes and beliefs regarding politics (Cleary and Stokes 2006). They introduced the notion of *'system affect',* which they treat as the "generalized attitude towards the system as a whole" (1989, 63). Within this general dimension they also distinguish between the *'input affect'*, defined as the "feelings have about (…) agencies and processes that are involved in the election of public officials, and about the enactment of general public policies, and the *'output affect'*, which is the "expectations people have of treatment at the hands of officials" (Ibid., 63-64). Almond and Verba's ([1963]; 1989) understanding of the output affect is equivalent to Easton's (1965) concept of support and to Gamson's (1968) concept of political trust.

In sum, all three scholars provided an important account on political trust in their own ways. Synergic effect of these three studies implanted the concept of trust into contemporary political science, placed it on the scale of attitudinal orientations to politics

and defended the crucial role of trust in a democratic society. In the next section I will show how early views on trust have since evolved in contemporary social, political and behavioral sciences.

Modern views on trust. Three scholarships discussed above have made a profound influence on contemporary understanding of trust. Although political trust literature has since grown enormously, there is still no scholarly consensus about the definition of trust and its connection with related concepts.

Following the tradition laid out by Gamson (1968) contemporary research typically views trust as political attitude (Castelfranchi and Falcone 2010; Citrin and Muste 1999, but also see Riker 1980 for critique). However, the views on how this attitude is constructed remains debated—the point to which I return in chapter 4. Psychological literature typically treats trust as an affective attitude or emotion (Jones 1996). This perspective reflects a particular way of viewing the object of trust and informs trusters' interpretation of the actions of the ones trusted (cf. Murphy 2010). More specifically, as Jones (1996) stresses, trust is an attitude of optimism and hopefulness in regard to the competence and the will of the trustee.

Along with the characteristics of attitude, trust also contains expectations from an object to which it relates. This forecasting property is an important characteristic of trust. Paraphrasing Luhmann (1979, 10) "to show trust is to anticipate the future. It is to behave as if the future was certain." The attitudinal and expectational characteristics of trust combine to explain why people are willing to trust some and distrust the others (Jones 1996). As Jones argued "to trust someone is to have an attitude of optimism about her goodwill and to have confident expectation that, when the need arises, the

one trusted will be directly and favorably moved by the thought that you are counting on her" (Ibid., 5-6).

Many other scholars offer similar views on trust. (Offe 1999, 47; italics in the original) defined trust as the "*belief* concerning the action that is to be expected from others." Sztompka (1998, 25) argued that it is a "bet about the future actions of the others." Good (1988, 33) stressed that trust is "based on an individual's theory as to how another person will perform on some future occasion." Trust hence, arises as a way to minimize people's uncertainty about the events of which they have little or now direct control (Levi and Stoker 2000; Offe 1999; Sztompka 1999), and serves as a "simplifying strategy that enables individuals to adapt to complex social environment" (Earle and Cvetkovich 1995, 38).

Hardin (2004) went further arguing that for the trust to emerge, one's expectations need to be grounded in the understanding—possibly false—that the object of trust has an *interest* of fulfilling the trust. Hardin claimed that the whole point of trusting relationships is likely to be a mutual interest. As Citrin and Muste (Citrin and Muste 1999, 446) put it, trust in government "allows citizens… to plan and not to worry [and provides the] authorities with the freedom to act and expect to be obeyed".

Trust is seldom unconditional and can only emerge in the context of social relationships (Sztompka, 1999). It is "always found in friendship, often found between professionals and their clients, sometimes found between strangers, and sometimes, even, *between people and their governments*" (Jones 1996, 5; italics added). There is little doubt regarding the social context of interpersonal trust; however, there some scholars expressed doubts that trust in institutions is possible. Some argue that the fact that citizens enter into juridical relationship with their national government during the

elections provides sufficient reasons for political trust (Levi and Stoker 2000). Others believe however, that people might not "trust an organization but might merely depend on its apparent predictability by induction from its past behavior" (Hardin 1999, 30).

According to Hardin, for the trust in government to emerge, two conditions are required. First, an individual must personally know the members of a given institution, and second, she or he must have a good knowledge of the institutions' role and functions. Since both conditions are typically unrealistic, Hardin (1999) argues, trust in government is a non-existent matter.

Building upon past scholarship (Levi 1998; Whiting 1998), I argue that in politics—dislike interpersonal context—individuals may not need to have a profound knowledge about the objects of their trust. First, people may rely on cognitive heuristics to make sociotropic and egocentric (pocketbook) evaluations of the government performance (Ferejohn 1986; Kinder and Kiewiet 1981). Second, since trust emerges in the situations of uncertainty (Luhmann 1988; Offe 1999; Sztompka 1999), this kind of situations by definition implies incomplete information. This would hence obviate the need for profound political knowledge as a precondition for the trust to develop. Moreover, trust in government in fact helps citizens overcome informational problems serving an important heuristic by itself (see Vasquez 2006). Finally, as some psychological accounts on trust evidence, it may not primarily rely on knowledge and beliefs about the others. Instead, modern views on emotions suggest that trust can be viewed as an affectively loaded way of seeing the one trusted (Jones 1996).

As one can see, there is a great deal of variation in the scholarly views on political trust. My understanding of political trust is most consistent with the attitude

view originally offered by Gamson (1968). I will revisit contemporary cognitive attitude theories and provide a more detailed analysis of political trust attitude in Chapter 4.

Defining political trust. In political science literature, political trust is typically defined as a normative evaluative orientation of the citizens towards their government based on its overall performance. Trust can also be viewed as an expectation that the government will contribute to public and personal welfare and refrain from inflicting people any damage. More generally, it is the belief that political system works for the citizenry (Moy and Scheufele 2000).

While the offered view dominates in political science literature, this definition appears too normative and rational given the largely affective nature of trust. Therefore, political science definitions of trust, in my view, require some social-psychological twist. Building on contemporary attitude theories (cf. Banaji and Heiphetz 2010; Bohner and Wänke 2002; Citrin and Muste 1999; Jones 1996; Krosnick, Judd, and Wittenbrink 2005; Wegner and Carlston 2005), I suggest the following definition of trust. Political trust is an *individual's cognitive-affective reaction to the abstract psychological object of "the government in Washington" (ANES measure) that is cognitively linked to the incumbent administration.*

My definition is also consistent with the psychological perspective on trust, which entails that individuals rarely trust the others completely. Typically, trust covers only certain areas of interaction (cf. Murphy 2010). As it comes from my definition, I share the view that trust in government as measured by the ANES is consistently related to the evaluation of incumbent administration performance in various domains (Banaji and Heiphetz 2010; Bohner and Wänke 2002; Citrin and Green 1986; Citrin and Muste 1999; Hetherington 1997; 1998; Jones 1996; Parker 1986; Wegner and Carlston

2005). Therefore, throughout this text I will associate political trust with specific support people give to incumbent administrations rather than the diffuse support of a political system in general.

What Trust is not? Placing Trust on the Scale of Attitudinal Orientations to Politics

Until the concept of political trust firmly established itself in the literature in the mid-1970s, scholars had been using various definitions referring to the same concept. Almond and Verba (1963; 1989) used the term *'output affect'* and equated it with the loyalty to and pride in political regime, and belief in how the system should operate. Easton (1965) preferred the term *'political support',* and Gamson (1968) coined the definition of *political trust.*

This inconsistency of terms used in the early scholarships on trust represents more of a terminological difference rather than conceptual dissent (Riker 1980). In fact, Gamson (1968) himself argues that his understanding of trust was equivalent to what Easton's (1965) called *'political support'* and Almond and Verba's (1963) referred to as the *'output affect'*. Later critique likewise combines these early views under the umbrella of political trust (cf. e g. Cook and Gronke 2005; Ludwig 2005; Riker 1980).

The majority of later studies rely on Easton's (1965) view of trust. For Easton (1965) it is the dissatisfaction with the system outputs, which leads the public to distrust incumbent officials. He calls this type of trust *specific support.* This in turn, can detriment institutional trust and erode support to political system as a whole. He defines it as *diffuse support.* Easton's model implies multiple objects and sources, and several types of political trust. Because of this complexity, scholarship often refers to the same concept using at least three other constructs synonymously with trust, i.e.

political skepticism, cynicism and alienation (Cook and Gronke 2005; Ludwig 2005; Krouwel and Abts 2007; Miller 1974).

I subscribe to the view that these concepts are not unrelated to each other (Schyns and Koop 2007), and can be viewed as the degrees of the general political discontent scale (Krouwel and Abts 2007). However, the fact that these attitudes are related does not mean one should equate them unconditionally. Seeman (1975) argues that the unity of the concepts depends on how they are put together conceptually and empirically. Therefore, in order to decompose the relationships between the attitudes in question, it is important to address theoretical and empirical relationships of trust with related political attitudes in more details.

Theories often describe individual political orientations as a hypothetical continuous scale, which ranges from the most favorable to the least favorable political attitudes. Dahl (1966) was among the first to describe such a scale and outline the following individual orientations towards politics that lay on this continuum, i.e. "*allegiance*, when attitudes, feelings and evaluations are favorable to the political system; *apathy* or *detachment*, when attitudes, feelings and evaluations are neutral rather than positive or negative; and *alienation*, when attitudes, feelings and evaluations are unfavorable" (Dahl, 1966, 353; italics added). Recall that Gamson (1968) discussed a similar three-point scale of political orientations, which ranges from trust to neutrality to discontent.

Social theories of trust (Luhmann 1979; Sztompka 1999) refine the views of Dahl (1966) and Gamson (1968). Taking these theories as a starting point, Krouwel and Abts (2007) construct a cumulative scale of political orientations ranging from trust to skepticism to distrust to cynicism to alienation. These attitudes can be viewed as the

increment points—although not necessarily equally spaced—on a hypothetical scale running from absolute trust to complete political alienation (fig. 2.1).

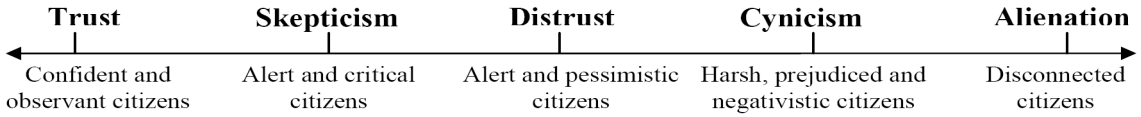

Figure 2.1. Degrees of political discontent

Notes: adapted from Krouwel and Abts 2007

Political scientists usually often view trust as a belief that the government will work according to citizenry expectations. This confidence frees people from the need of constant monitoring and thus can ultimately take the form of a naive and unquestioned leap of faith (Möllering 2006, 191)**.**

If trust is an unquestioned leap of faith, *skepticism* is a questioned or conditional belief. Oxford dictionary (2007, 1646) defines skepticism as an "attitude of doubt or a disposition to incredulity either in general or towards a particular object" and suggests *uncertainty* as its synonym. In other words, skepticism is a presumption that political authorities should be viewed with doubt (Cook and Gronke 2005). Skepticism is about matching belief to evidence and thus skeptics remain very vigilant and do not take the truthfulness of political claims for granted (Krouwel and Abts 2007). Similar to trust, skepticism is a situational attitude rather than a stable personality characteristic. Mohr, Erolu and Scholder-Ellen (1998, 32) believe that skepticism is "a cognitive response that varies depending on the context and content of the communication."

Skepticism occupies a middle position between trust and distrust, although Mishler and Rose (1997) argue that by definition it is closer to the latter. Skepticism is an attitude of reserve where both trust and distrust are temporarily suspended. This

means that skeptics take a position of responsible criticism and can either revoke or grant their confidence to politicians and institutions depending on the situation. Some scholarships advocate skepticism—a blending of trust and distrust—as the optimum of modern democracies (Sniderman 1981).

Political distrust develops when a skeptical citizen becomes frequently disappointed or keeps feeling betrayed by political actors or malfunctioning institutions (Barber 1983; Luhmann 1979; Sztompka 1999). Whereas confident citizens have positive expectations of politics, those distrustful have predominantly negative beliefs in the actions of politicians and have a negative and defensive attitude towards the system in general. Political distrust is defined as an attitude of suspicion and wariness, a feeling of uncertainty and lack of confidence in others (Krouwel and Abts 2007). Distrusting citizens have a suspicious mindset forcing them to constantly monitor politicians and politics; yet they usually have a biased and pessimistic perception (Ibid.).

Political cynicism is "the attitude of disbelief of the good intentions and behaviors of political actor" (Rosenthal, van Schendelen and Scholten 1977, 41). Cynicism and distrust are most often treated as similar or even identical constructs in public opinion research (Cook and Gronke 2005; Hibbing and Theiss-Morse 1995; Newton 1999; Schyns and Koop 2007; de Vreese 2004). Some prototypical examples are "political cynicism and its mirror image trust" (Jennings and Niemi 1968, 177), "political cynicism or distrust" (Lyons 1970, 291), or "distrust, or political "cynicism" (Erber and Lau 1990, 246). However, conceptually two measures are not the same. As Cappella and Jamieson (1997, 271) show, cynicism only has a modest correlation with the conventional measures of trust.

A likely reason for the ongoing confusion is that cynicism is close to Easton's (1965; 1975) view of diffuse support—disaffection with political system in general. Miller (1974a) builds up on this idea arguing that the widespread political cynicism, which he equates with trust, is caused by the public dissatisfaction with the centrist policy alternatives offered by the two major parties (cf. Erber and Lau 1990). Citrin (1974) disagrees. He understands trust as an indicator of satisfaction with incumbent leaders rather than politics and political system in general.

The latter argument found additional support in the studies, building on further distinctions between (dis)trust and cynicism. Krouwel and Abts (2007, 260) argued that the two attitudes rely on different cognitive mechanisms. Whereas trust, skepticism, and distrust require critical thought, cynicism lacks any reflexivity. Thus, cynicism is a "pre-reflexive and obsessive lack of trust, combined with an outright disbelief in positive motives and actions of others" (Ibid., 260). If distrust no longer relies on knowledge, observation, or informed argumentation, it turns into a cynicism. As Pye (Pye 1962, 55) puts it "when basic trust is replaced by cynicism, people will suspect that behind the screen of political promises their leaders are really "out to get everything for themselves". Thus, cynicism represents a predominately negative worldview, whereas distrust is situational and reflects people's attitudes to the government *here now*.

Dislike distrust, cynicism is a general characterological orientation, which *spills over* into all aspects of political perceptions (Zonis 1968). Hodges (1962, 33) argues that cynics are "irreverent toward culture, disloyal to the State, resentful to authority, anti-intellectual, and scornful of conventional morality." Distrust in turn, is always specific to a person (e.g. a President) or a group (e.g. government). Finally, cynicism cannot easily reverse into the opposite, i.e. altruism or positivism, whereas survey

research demonstrates high an extent of variation in trust over relatively short periods of time (see fig. 1.1).

Political alienation is typically conceptualized as political estrangement; that is "perception that one does not identify oneself with the political system" (Schwartz 1973, 7). People with high scores on alienation scale feel they lack influence over political process; that the government and elected officials do not care about or represent an individual's interests, and that political rules are biased and unfair[7].

Seeman (1959; 1991) was the first to offer a systematic analysis of political alienation. He argued that it is a compound construct consisting of six dimensions: powerlessness, meaningless, normlessness, social-cultural estrangement, and depersonalization or self-estrangement activity. Finifter (1970) further reduced this typology to four dimensions by leaving out two last components. It is important to make an insight into these dimensions to understand how alienation differs from trust.

Powerlessness is a feeling that people cannot affect the actions of government and that political process is not subject to their influence. Meaningless is the extent to which citizens perceive political decisions as unpredictable. Normlessness is understood as individuals' perception that the norms or rules intended to govern political relations have broken down. Finally, isolation refers to the rejection of political norms and goals that are widely shared by other members of a society (Finifter 1970, 390-91). The common focal point of all four dimensions is the "individual citizen as a political actor, ignoring the political system itself as an object worthy of loyalty and support" (Reef and Knoke 1999, 414).

[7] Political alienation is also often used synonymously to political trust. For instance, Traugott and Katosh (1979) argue that ANES political trust scale measures' the degree of respondent's alienation from the political system

This makes alienation a "*deep-seated and relatively enduring feelings* of estrangement, rejection, negativism, and unhappiness with the political system or its salient parts" (Milbrath and Goel 1977, 62; italics added). In Easton's (1965) terms, this conceptual definition indicates a profound discontent with political system in general. This implies a loss of both procedural and systemic trust. However, current theoretical and research practice asserts a sharp separation between political trust to incumbent leaders and trust to a political system as a whole (Cook and Cronke 2005; Roof and Knoke 1999). The domain of political trust is traditionally reserved for defining the attitude to the incumbents of political offices, whereas alienation concentrates more broadly on political system rather than on specific officeholders (Ibid.). Therefore, political trust conceived in terms of specific support and as measured by the ANES Trust in Government scale is not equivalent to political alienation.

Studies addressing the validity of the ANES Trust in Government scale argue that it measures political skepticism rather than cynicism or alienation (Cook and Gronke 2005), and specific rather than diffuse support in Easton's (1965; 1975) terms. Therefore, scholars reach a somewhat comforting conclusion American public is more skeptical than cynical or alienated from politics, and that the threatening ramifications of the decline in the ANES measure of trust have been exaggerated (Cook and Gronke 2005).

Chapter summary

In this chapter I discussed the evolution of views on political trust in social and political sciences in the last half century. I began by reviewing the seminal works of Easton, Gamson, and Almond and Verba and connected their early views with modern

understanding of political trust. Building on contemporary social and political science' views of trust as well and complementing these views by the cognitive psychological attitude theories I define trust as *individual's cognitive-affective reaction to the abstract psychological object of "the government in Washington" (ANES measure) that is cognitively linked to the incumbent administration.* I concluded by putting political trust attitude on the scale of individual political orientations, and discussing how it is related to skepticism, cynicism and alienation—the concepts with which it is often used synonymously. I argue that trust is conceptually close to skepticism but is distinct from cynicism and alienation.

CHAPTER 3

POLITICAL THEORIES OF TRUST

> There is no issue in American politics that is more difficult to unravel, or more significant for the future of representative government in the United States than the issue of public trust
>
> Joseph Cooper (1999). "Congress and the decline of public trust"

In this chapter, I review three political theories explaining the sources and dynamics of trust. First, I focus on the cultural theories that view trust as exogenous to political institutions and seek the causes of declining trust in the non-political factors, such as social capital, social norms and values. Next, I review the performance theories, which argue that trust is endogenous to the government performance. Finally, I present the media effects' approach and discuss whether exposure to the media outlets may be responsible for the decline in trust.

Overview of theories

Levi and Stoker (2000) outline three waves in political trust research. The first stage of development was catalyzed by Easton's (1965) milestone study on political support. The second stage was stimulated by the social and political unrest in the 1960s and early 1970s. The third stage was marked by the dramatic decline of trust following the Watergate—the trend arguably first noticed by Arthur Miller (1974a).

The literature on political trust began in the early 1970s as a spin-off of a political alienation research (Levi and Stoker 2000). Early studies generally followed Easton's (1965) milestone conceptualization of government support. However, Easton's (1965; 1975) distinction between specific and diffuse political support led to the development of two alternative views on trust[8]. Miller (1974a; 1974b) argued that

[8] This primarily refers to the ANES measure of political trust

substantial decline in trust in the 1960s reflected public dissatisfaction with the policies of both Republican and Democratic administrations. Miller advocated the view that declining political trust was a result of profound public with American political system in general. As such—he believed—low political trust could lead to public rejection of government institutions and pose a threat to the overall political system.

Citrin (1974) assumed a more optimistic view on the problem. He argued that declining trust reflects a mere dissatisfaction with incumbent administration rather than the whole system. Hence, low levels of trust in his view would not endanger political regime but would pose a threat to the reelection prospects of current administration.

Miller (1974a; 1974b) and Citrin's (1974) positions are not merely "cup-half-empty" and "cup-half-full" views on political trust. Even though trust is critical to both sides, in Miller's view, trust is a precursor to demands for a radical political change. Under Citrin's formulation, trust is "barometer of public satisfaction with government" (Keele 2005, 884), and has—as I will show later in Chapter 10—important electoral and attitudinal consequences.

Two competing views on the nature, sources and consequences of political trust resulted in several theories explaining the long- and short-term changes in trust. The *cultural explanation*, consistent with Miller's (1974a, 1974b) position, assumes that trust originates outside the political sphere and is exogenous to political institutions (Mishler and Rose 2001). Trust is viewed here as a long-standing orientation caused by non-political factors, like social norms, early-life socialization, social capital, social and generalized interpersonal trust[9], and shift of cultural values (Mishler and Rose 2001).

[9] Generalized interpersonal trust measures people's trust in general rather than directed toward specific individuals or types of people (John L. Sullivan and Transue 1999).

The cultural theory is known as the "bottom up" approach (Campbell 2004), for distrust here is not a result of government performance, but depends on a decline of social trust and values' change.

Performance or *institutional theory* is more consistent with Citrin's (1974) position. Proponents of this theory argue that trust is endogenous to the incumbent government performance (Mishler and Rose 2001). It is rationally based and depends on public evaluations of the government (Ibid.). Citizens lend government their confidence if they are satisfied with its performance and withhold their trust if the outcomes are poor. Campbell (2004) calls performance theories a "top-down" approach (fig. 2.2.). Contrasting the cultural approach focusing on the long-term decline in political trust, performance theories shift the focus on the short-term variation in the trust.

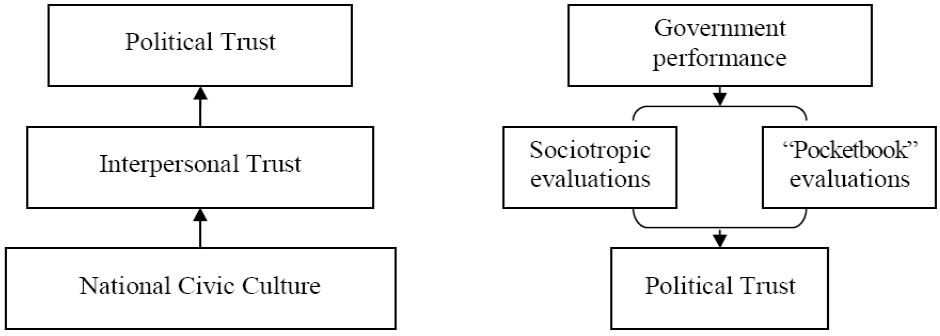

Figure 2.2. "Bottom-up" (cultural) and "top-down" (performance) approaches to trust

Notes: Adapted from Campbell (2004)

The third approach stresses the role of the *mass media* in the decline of political trust. This theory advocates the view that in the last fifty years media has become increasingly severe upon the government, thus changing people's expectations from the

government and ameliorating their trust (Patterson 1993; Dalton 2004; Cappella and Jamieson 1996; (Lipset, Seymour Martin, Schneider 1983). Increased media exposure may have also undermined social capital, viewed as exogenous to trust (Putnam 2001). In addition to the long-term amelioration of trust, media is closely following governments' "ups and downs" and hence may be blamed responsible for the short-term fluctuation of trust (cf. Moy and Scheufele 2000 for critique). Proponents of this approach argue that it may explain the short- as well as the long-term change in political trust.

Cultural approach

The key assumption of the cultural approach, is that trust does not emerge, nor operate in a vacuum, as people view the governments according to the norms and values prevalent in society (Blind 2007; Segovia 2008). Many studies show that political trust is indispensable from social capital (Brewer 2002; Grulke 2008; Karjala 2007; Keele 2002; 2007; Kim 2005; Levi and Stoker 2000; Newton 2001a; 2001b; Schyns and Koop 2009), social trust (Newton 2007; Sullivan and Transue 1999; Ulbig 2002), and cultural value orientations (Inglehart 1997; Schwartz 2006).

The roots of the cultural approach may be traced back to Almond and Verba ([1963] 1989), who coined the terms *civic* and *political culture*. Civic culture, of which they speak as of a "psychological orientation towards social objects" (Almond and Verba 1963, 13; italics in the original) serves a link between public and government and configures national political culture.

Since civic and political cultures are interrelated, interpersonal trust is also related to political trust, to which they refer as "trusting attitude in political affairs" (1963, 224). Almond and Verba (1963) argue that political trust originates from the social trust and values learned early in life and later on projected on political institutions (Mishler and

Rose 2001). Thus, citizens who have more faith in the others tend to display more confidence in politicians and democratic institutions (Lühiste 2006). Although Almond and Verba (1963; 1965) did not establish the causality between the interpersonal and institutional trust (cf. Sullivan and Transue 1999), their research nevertheless stimulated further development of what is now known as the cultural theory of trust.

Two major hypotheses have been developed within the cultural approach. The first hypothesis originates from Putnam's (1995; 2001) social capital theory and blames the decline in political trust on the diminishing social capital—a broad concept, which encompasses membership in voluntary social organizations and interpersonal trust among the rest. The second hypothesis stems in the Inglehart's (1988; 1990; 1997) theory of cultural change and postmaterialist values. It suggests that postmaterialism values' shift eroded people's respect to authorities.

Social capital. In the last decades the question of declining social capital and its spill-over effect into political trust have received much attention in the literature (Brehm and Rahn 1997; Keele, 2003; 2007; Newton 1999; Putnam 1993; 1995). Putnam (Putnam 1993, 167) defined social capital as the "features of social organization, such as trust, norms, and networks that can improve the efficiency of society by facilitating coordinated actions". Building on de Tocqueville ([1835 1840] 2007), Putnam suggested that participation in voluntary social associations—the so-called "civic engagement"—promotes cohesion between the people and creates social capital. The latter manifests itself in the form of shared feelings and interpersonal trust (Putnam 1993; 1995). Thus, the core concepts of social capital are civic engagement and trusting attitudes, encompassing both social and political trust (Keele, 2007).

Although Putnam viewed social trust as exogenous to political trust, the direction of causality here is not clear (Blind 2007). Is the declining social trust pulling down people's confidence in political institutions or is it the other way around? Are two concepts related or are they being affected by a common set of exogenous factors? The answers to these questions largely depend on the schools of thought to which one belongs.

Modernization theorists argue that political trust is an extension of interpersonal trust, learned early in life and, much later, projected onto political institutions (Almond and Verba [1963] 1989; for critique see Levi 1996). More recently, the new-institutionalism school questioned this view. Its proponents argue that it is not social capital that produces political trust, but rather a trustworthy government that generates social trust (Sullivan and Transue, 1999).

In political science both types of directionalities found at least some empirical support. Brehm and Rahn (1997) fitted a three-way causal model, which included interpersonal trust, civic engagement, and the General Social Survey (GSS) measures of confidence in American national institutions[10]. They reported a bi-directional relationship between institutional trust and social capital. They concluded that social capital "may be as much a consequence of confidence in institutions as the reverse" (Brehm and Rahn 1997, 1018).

In a more recent study Keele (2003; 2007) examined the direction of causality between social capital and political trust by means of a Granger causality test. He reported significant effect of social capital on political trust controlled for the measures of government performance. Keele thus concluded that the long-term equilibrium in

[10] GSS approach to political trust differs from ANES. The first operationalizes it as the amount of confidence people have in the Executive, Legislative and Judicial branches (see Chapter 6).

political trust is indeed explained by the decline in social capital and interpersonal trust, whereas the short-term fluctuations in trust depend on the government performance.

The social capital approach has received its share of the critique. Perhaps, the strongest criticism comes from Uslaner (2002; 2004). Uslaner argued that trust is a moral value people learn early in their life. It is largely independent of adult experiences, including membership in voluntary associations. He believed instead that it was the growth in the income inequality in America that eroded trust (for critique see Nannestad 2008)

Postmaterialism and the cultural values' shift. An alternative school of thought claims that political trust rests on the foundation of societal values (Inglehart 1997; 1999; Schwartz 2006; Uslaner 2000; 2002). Such values encapsulate the "aspirations of individuals and societies and encompass deeply engrained standards that determine future directions and justify past actions" (Bernard, Maio and Olson 2003, 64). This view relates trust to a general outlook of a person, consisting of optimism, certain religious values, most strongly embodied in Protestantism, and egalitarianism (Nannestad 2008). Such values and norms are internalized early in life through socialization processes and are largely stable through the life course. However, as the western societies have been experiencing a profound change of values in the last half-century, this change was supposed to have an impact on the levels of social and political trust in public.

The idea that cultural values' shift led to the change in political attitudes in general, and to the declines in social and political trust in particular, is attributed to Inglehart (1990; 1997; 1999). This shift in the core societal values—the *silent revolution* as Inglehart (1990) phrased it—occurred due to the post-war generation change in the

1950s. It was determined by the growing material and physical security of the people and was catalyzed by the increased cognitive mobilization.

Cognitive mobilization and growing material and physical security lead, in turn, to the shift from material values with an emphasis on economic and physical security, to the postmaterial values prioritizing autonomy, self-expression and quality of life (Inglehart 1990, 1997). As post-materialist values become more spread thanks to the growing cohort of young, better-educated and better-off citizens, they eroded public respect to the authorities and led to further political discontent of the citizens (Dalton 1999; Inglehart 1990; Inglehart 1997)(Inglehart 1990; 1997; Dalton 2000b).

Surveys indeed show that postmaterialists are especially critical to the hierarchic and structured nature of contemporary representative democracy. Particularly, they treat authorities and big centralized organizations—including the government, armed forces, police and church—with most suspicion (Dalton 2000; Inglehart 1997, 78; 1999). However, there is no convincing survey evidence that postmaterialists express significantly less trust in government than materialists (Dalton 2004).

Postmaterial values' shift in the western democracies led to the paradoxical outcomes. On the one hand it "made mass publics more likely to want democracy and more skillful at getting it" (Inglehart 1997, 30). On the other hand, the emphases on the priority of human values led to the increase in individualism and rejection of the authorities (Flanagan 1987; Inglehart 1990; 1997; 1999). As a result—advocates of the postmaterialist theory argue—citizens' confidence in politics fell into a downward spiral.

Postmaterialism theory has received substantial critiques in the literature. Whereas Inglehart (1990; 1997; 1999) offered an elegant and appealing theory, empirical support for the causality between postmaterialism values and decline in political trust was mixed. Based on the World Values' Survey (WVS) data, postmaterial values have little independent effect on the authority support and only weakly affect political trust (Dalton 2004).

As one could see, cultural approach provides a rather appealing—but not impeccable—explanation of the long-term equilibrium of political trust. However, survey data provides clear evidence that in addition to the long-term decline, trust also has high short-term variability. Therefore, additional factors need to be considered in order to understand the short-term variation in political trust.

Government performance approach

Whereas the cultural approach seeks to explain the long-term decline of trust with the change of social norms and values, performance theories shift the focus from social to political nexus and argue that political trust is endogenous to government performance. This view is underlain by a simple assumption that people tend to trust things they perceive to be working effectively. Perceived quality of policy outcomes is therefore seen as the main cause of change in political trust (cf. Citrin and Green, 1986; Hetherington, 1998; Newton, 1999; Keele, 2003; 2007; Lühiste, 2006). Therefore, as citizens' satisfaction with the policies implemented by incumbent officials increases, researchers expect trust to increase as well (Chanley 2002). Performance theories primarily concentrate on government's abilities to meet citizens' expectations in socioeconomic, political and international/defense domains.

*Socioeconomic performance***.** It has become almost a truism in political science that government economic performance promotes public trust (Chanley, Rudolph, and Rahn 2000; Citrin 1974; Weatherford 1987). Scholars argue that trust fluctuates along with the economic up- and downturns (Chanley, Rudolph, and Rahn 2000; Hetherington, 1998; Mishler and Rose, 2001; Rohrschneider and Schmitt-Beck, 2002; Miller and Borelli, 1991; Citrin and Green, 1986). The relationship between economic indicators and political trust is very straightforward. Inflation, unemployment, economic prosperity, or energy crises are high valence issues and are uppermost in public mind (Citrin 1974, 987). As expected, citizens tend to reward their government with higher confidence in its actions during the strong economy (but see Hetherington and Rudolph 2008 for critique) and withdraw their trust during the economic downturns (Chanley, Thomas J. Rudolph, and Wendy M. Rahn 2000; Citrin and Green 1986b; Citrin and Luks 2001; Feldman 1983; Keele 2003; Keele 2007; Lawrence 1997; Arthur H. Miller and Borrelli 1991). As Hetherington and Rudolph (2008, 4) put it:

> Fluctuations in economic outcomes appear to covary with movements in political trust over time. Trust declined through the 1970s, a decade characterized by declining real income, high unemployment, and skyrocketing inflation. Trust then increased with the economic resurgence of the middle Reagan years, only to decline again in the early 1990s during a recession. When a long, uninterrupted economic rebound occurred under Bill Clinton, trust in government rebounded, despite the president's persistent and intense scandal problems. Taken together, a strong link between political trust and the economy appears to exist.

This explanation looks particularly appealing since the first major decline in political trust overlapped with the period of slow productivity growth, increasing inequality, globalization and technological change in the early 1970s (Lawrence 1997).

If the problem is this simple, so must be the explanation. As the United States was on the peak of its economic prosperity in 1990s, one would expect trust in

government to be at its climax. However, trust never returned to the levels on 1950s-1960s even in the time of best economic prosperity (cf. Bennett 2001; Hetherington 1998; Hetherington and Rudolph 2008). Therefore, economic ebbs and flows may not be a sole explanation for the change in political trust (cf. Kelleher and Wollak 2007; Lawrence 1997).

Lawrence (1997) brings in even more puzzling evidence. Having analyzed the forty-year change in the major American economic and social-cultural indicators he concluded that the economy and standards of living were never as high as in the 1990s—the time of his writing. He concluded that decline in trust had the same slope and moved synchronously among the Americans regardless of income, age, education, and geographical location. Hence, decline in trust did not correlate with individual economic experiences. Instead Lawrence (1997) argued that while economic factors might be contributory, it was the social change of the 1960s-1970s—the Vietnam War, Watergate, and Civil Rights movement—that convinced Americans that their government can not be trusted and sent trust into a tailspin.

Uslaner (1999) carefully examined correlation between a particular type of economic evaluations and trust in different branches of government. He argued that only the pocketbook evaluations of the economy affect political trust. However, the effect is at least weak: people who said their finances were getting better, had higher political trust, but the family income indicator has no effect on trust (Uslaner 1999).

Hetherington and Rudolph (2008) suggested a more nuanced explanation of the relationship between economic performance and trust. They argued that the relationship between economy and trust is asymmetric. When economic issues become salient for the public, economic criteria prevail in public judgments about the

trustworthiness of the government. However, when the economy improves, economic cues fail to play any significant role in the government evaluations. Since fewer people think about economy in good times, political trust suffers from hard times more than it benefits from good times. The evidence that the strong economies of the past thirty years increased trust less than the poor economies diminished it may hence explain the long-term equilibrium of trust.

Taken together, findings draw a more complicated relationship between economic indicators and trust than it first appears. First, conclusions largely depend on the research methodology, particularly whether economic performance is modeled as constant or dynamic. Second, the relationship between the two variables may be asymmetric—a point missed in most studies. Third, the magnitude of this relationship might be moderated by other variables, particularly by the perceived salience of the economic issues in the mass public (Hetherington and Rudolph 2008).

Political scandals. Of all non-economic variables political trust research has perhaps most frequently analyzed the effect of *political scandals* on trust (Bowler and Karp 2004; Brewer 2002; Chanley, Rudolph, and Rahn 2000; Dalton 2004; Holzer et al. 2003; Keele 2003; 2005; Miller, Goldenberg, and Erbring 1979). The reason for this research attention is clear: actions of both executive and legislative branches are crystallized in scandals and the media focus on those scandals that increased dramatically since Watergate (cf. Garment 1992).

This line of research builds on the extensive public opinion literature showing the causal relationship between the presidential scandals and executive approval ratings. Studies typically report a profound negative effect of political scandals on public perception of a president. Students of political trust similarly found significant negative

relationship between the scandals in the executive and legislative branches and decline in public trust (Chanley, Rudolph and Rahn 2000; Hetherington and Rudolph 2008; Garment 1991; Keele 2007; but see also Miller and Borelli 1991). However, the resulting conclusions are not robust and depend on the analytical approach chosen by the researchers.

Chanley, Rudolph and Rahn (2000) reported that congressional scandals had significant effect on political trust, whereas the effect of the executive scandals' series does not reach statistical significance. This finding is consistent with the previous research showing that trust in the federal government has stronger ties with the legislative branch (Feldman 1983; Hetherington 1998) but challenges the idea that presidential and congressional evaluations are closely related (Hetherington 1998).

Keele (2007) chose another analytical strategy and modeled scandals as separate dummy-coded series. He showed that Watergate, ABSCAM and Jim Wright scandals exerted significant negative effect on political trust, whereas Koreagate, Iran-Contra, Keating Five, House Bank, House Post Office, White House Travel Office, Whitewater and Filegate had no effect on public trust in government. Thus, in his analysis the effect of the scandals on trust did not depend on the branch of the government in which the scandal occurred. Instead, it was certain characteristics of the scandals themselves that moderate their effect on trust.

Taken together, empirical evidence suggests that shifts in political trust may be indeed partly explained by the outbursts of the executive and legislative scandals. However, because of a substantial variability of findings, the relationship between political scandals and public trust in government remains unclear.

Foreign policy issues and homeland defense. Another popular explanation of change in the levels of political trust is government success in the national defense and foreign policy domains(Bishop 2005; Chanley 2002; Hetherington and Rudolph 2008; Mueller 1973; Nye 1997). Consistent with the "rally-round-the-flag" explanation (Mueller 1973), students of political trust suggest that when public attention shifts from concern about economy and domestic policy issues to concerns about foreign policy and defense issues and national defense, trust in government should increase as the nation "pulls together to address international concerns or defend national security" (Chanley 2002, 470).

Consistent with Mueller's "rally-round-the-flag" theory, Nye (1997) suggested that concerns about the national defense inspired by the Cold War might have helped to solidify public trust in government. Chanley (2002) found that that the increase in trust following September 11 attacks was a function of the rally effect. Bishop (2005) and Langer (2002) draw the same conclusions in their research. Previously, many social psychologists arrived to the same conclusion that out-group threats lead to the increase in support for the in-group authorities (Allport 1954; Sherif 1966; Tajfel and Turner 1979).

The evidence brought by other studies however, sheds some doubts on the relationship between the foreign policy and defense issues and political trust. For instance, using a different empirical design[11], Chanley and colleagues (2000) failed to find a significant relationship between the rally effects and political trust. Also, contrary to the rally theory, trust reached its minimum soon after the collapse of USSR and the end of the Cold War. However, subsequent studies explained this decline by the shift of

[11] Chanley et al. (2000) employed the vector-autoregression approach. In a subsequent study, Chanley (2002) used the distributed lad technique with Koyck transformation.

public opinion from international to macroeconomic issues (Krosnick and Brannon 1993a; 1993b).

Macro-political explanations of trust. This line of research does not view government as an abstract and monolithic entity. Instead, it aims to assess whether political trust varies during divided and united governments, whether it depends on the party in control and finally, whether respondents' partisanship matters (cf. Keele 2005).

Bernstein (2001) offered the general-cynicism and partisan-control models of trust. He argued that under the general cynicism model those with a general distaste for the government would dislike both branches, and those with less cynicism would like both (Bernstein 2001; Lebo 2008). This effect is expected to hold true regardless of the parties in control. In contrast, the partisan-control hypothesis argues that the effect of trust will be moderated by party identification. Partisan trust will decline if the opposition party is in control, and will increase, if the own party takes over. Current empirical evidence is more consistent with the partisan-control model (see Keele 2005).

Taken together, empirical findings offer persuasive evidence that government performance is an important predictor of political trust. However, there remain at least several uncomforting questions, which require further explanation. Consider just a few. How does government economic performance affect political trust in good and bad times? If government successes on the international arena have positive effect on trust why did it reach its' that-time minimum soon after the end of the Cold War? Why do some political scandals send trust into a tailspin, while the others produce no effect on public evaluations of the government (cf. Keele 2005). These questions stress once again that the effect of government performance on political trust is not symmetrical

and may be moderated by other variables—particularly, by perceived issue importance in the mass public (see Hetherington and Rudolph 2008).

Media effects' approach

Much of the blame for the decline in trust has been put on the media, especially since the rise of television[12]. Studies often argue that increasing negative media coverage of politics and politicians has changed people's expectations about politics and promoted distrust (Bennett et al. 1999; Cappella and Jamieson 1996; Dalton 2004; Norris 2000; Lipset and Schneider 1983; Patterson 1993). For instance, Garment (1992) attributed public belief that politicians became more corrupt to the increased media coverage and public attention to political scandals in government. Cappella and Jamieson (1997) argued that the change in the style of political coverage stressed conflict in ways that contribute to what they call a "spiral of cynicism."

While the link between the increasingly negative coverage of the government in the media and declining trust may seem obvious, empirical evidence is at least mixed. The approaches I discuss below suggest that the effect of media on trust may be negative, positive and even bidirectional.

Proponents of the so-called *mediamalaise hypothesis* developed in the post-Watergate period (Robinson 1976) argued that media exposure and change in the news coverage had a negative effect on trust (Cappella 2002; Cappella and Jamieson 1997; de Vreese and Semetko 2002; Lipset and Schneider 1987; Mutz and Reeves 2005; Pharr and Putnam 2000; Robinson 1976;). Although the mediamalaise theory had become "the conventional wisdom in the popular culture of journalism and politics following a

[12] Discussion in this section will be limited to the pre-cognitive "moderate-effects" paradigm of the media effects (Zhu and Blood 1996). I discuss the cognitive theories of media effects in the next chapter

flood of books in the 1990s" (Norris 2000, 2), it was harshly attacked in subsequent studies (Bennett et al. 1999; Gross 2004; Hetherington 1998; Moy and Scheufele 2000; Norris 2004).

An alternative *cognitive mobilization* theory suggested that media coverage of political phenomena might on the contrary promote trust (Brooks and Geer 2007; Newton 1999a; Newton and Norris 1999; Pinkleton et al. 1998).

A third group of scholars suggested that relationship between media and trust may be conditioned by the type and content of the media and political interest of the audience (Becker and Whitney 1980; Moy, Pfau, and Kahlor 1999; Moy and Pfau 2000). Depending on the mediating variables media may have both positive and negative effects on trust.

Mediamalaise theory. For over four decades scholars have been putting media consumption at the core of the growing public disaffection with politics (Cappella 2002; de Vreese and Semetko 2002; Luengo and Maurer 2009; Mutz and Reeves 2005a; O'Keefe, Mendelsohn, and Liu 1976; Robinson 1976). Indeed, following Putnam's (1995; 2000) theory exposure to the media erodes general trust, which in turn is linked to the trust in government.

While detachment from social trust-building civic activities is a part of the problem elaborated by Putnam (1995; 2000), media hunt for sensations, scandals, and personal rather than political issues creates another problem causing the decline in public trust in government (Cappella and Jamieson 1997).

Although political scientists had pointed out the negative effect of mass media long before (cf. Campbell et al. 1960), Robinson (1976) was reportedly the first to test the link between the negative coverage of politics in the media and rising political

cynicism empirically. He found that respondents relying on television news as a primary source for their political information demonstrated higher levels of political cynicism. This relationship held true after controlling for education, social class, and income. Robinson (1976, 429) argued that media "reach the audience with one essential message: none of our national policies work, none of our institutions respond, none of our political organizations succeed."

Since Robinson's (1976) pioneer research there was no shortage in the studies addressing the effect of mass media on political attitudes in general and trust in government in particular (cf. Norris 2000 for a detailed review). O'Keefe and Mendelsohn (1976) found increased attention to the televised political news to be positively associated with cynicism, distrust and inefficacy. Cappella and Jamieson (1996; 1997) argued that news media promote political cynicism. Mutz and Reeves (2005) similarly stressed that uncivil political discourse of the media had detrimental effects on political trust. Many other studies (Fallows 1996; Lichter and Amundson 1994; Lichter and Noyes 1996; Luengo and Maurer 2009; Patterson 1996a; Patterson 1996b) arrived to the similar conclusions.

In summary, the mediamalaise theory argues that the media news are overemphasizing the negative aspect of politics (Aarts, Fladmoe and Strömback 2010). Therefore, news outlets exert a negative effect on public attitudes to politics, particularly political trust, cynicism, efficacy and alienation. Moreover, even when the news are relatively balanced, the audience still tends to place more attention on the on the negative aspects of news (Ibid.). While this research evidence sounds very appealing, these conclusions have been challenged in later studies.

Cognitive mobilization theory. Whereas mediamalaise approach stresses on the detrimental effect of media on political attitudes, another group of theories on the contrary stresses the educational and mobilization role of mass media. The *cognitive mobilization theory* argues that increased quality of public education and easier access to political information via the media outlets help mobilizing citizens, both in terms of their attitudes and behaviors (Newton 1999). The key assumption of the cognitive mobilization theory is that increased exposure to the news media gives people better information and better understanding of politics, promotes more positive attitude to politics, particularly trust and efficacy (Ibid.).

Even if the government is heavily criticized in the news, it is not because the media have a negative bias but because they report on negative events, Dalton (2004) argues. To drop charges from the media he also stresses that media may actually be reacting to the changing public mood, not creating it. For instance, the public's new cynicism during political scandals may encourage the media to report events that reinforce this cynicism (Dalton 2004).

Studies show a steady increase in political sophistication, interest, and discussion all over the western world since the 1980s (cf. Dalton 2004). Yet, it is not entirely clear why increase in the cognitive mobilization would promote more positive attitudes to the government. Recall, that Inglehart (1990) on the contrary assumed that cognitive sophistication would lead to the decline in political trust. This issue is further addressed by the virtuous circle theory.

Virtuous circle theory. The *virtuous circle* theory developed by Norris (2000) suggests that the effect of mass media on political attitudes is conditional on political knowledge. Because those who watch/read the news are usually more politically

interested and trusting than the average citizen, media exposure will further moderate their interest and trust. At the same time, less educated and disinterested citizens will get further out of touch with the news, which will reinforce their lack of interest and trust.

This theory resonates with Zaller's (1992) model of selective media exposure. Similar to Zaller, Norris (2000) asserts that media has differential effects on trust depending on individual characteristics of the audience. She argues that individuals who are initially politically engaged and trusting will seek greater media exposure, which will reinforce their trust in government. Thus, for the politically engaged, there is a virtuous circle, where trust leads to greater media exposure and greater exposure leads to greater trust (Norris 2000). On the other hand, cynical and disengaged citizens will select themselves out of any potential influence, choosing to ignore the news media altogether. Even when exposed to the news, according to Norris, politically mistrusting and inactive would still be unlikely to get persuaded by the news because of their distrust in the news media.

The latter argument is consistent with the claim that trust is a fragile commodity that is easy to tear down but difficult to rebuild (Levi 1998). As Cappella and Jamieson (1997, 141) put it: "the cynic's first response is one of distrust. The issue is not whether the mistrust is deserved or not. Rather, the cynic begins with mistrust and must be persuaded to the opposite view." Thus as Avery (2009) concludes, for those who are cynical or politically mistrusting, an increase in trust requires an evidence that trust is deserved—something they are not likely to get from the typical television or the newspaper coverage.

Taken together, the evidence brought in by media effects theories adds even more confusion to political trust research. As Norris (2000, 250) concluded: "we need to look elsewhere than television news for the source of our political ills."

In my opinion, Norris' conclusion is preliminary. Psychologists and survey researchers found persuasive evidence that media does affect public attitudes. This effect occurs not because media reinforces negative attitudes, but because it *primes*—that is puts more emphasis on certain issues. Priming model draws a different pathway by which mass media may influence public attitudes. Whereas media persuasion theories focus on the particular media messages that may reinforce public attitudes by advocating certain issues, priming can be caused by the neutral news stories dedicating more attention to certain issues but without advocating a certain position (Miller and Krosnick 2000). I will return to the cognitive priming theory in the next chapter.

Chapter summary

In contemporary political and public opinion research change in political trust is usually viewed as a function of decline in the social capital and change in the cultural values, swings in the government performance and negative influence of the mass media. As I showed above, each of these approaches relies on the mixed empirical evidence and none of them offers convincing explanations of the long- and short-term change of political trust. Thus, two major questions posited at the outset remain largely unresolved: why does political trust decline over time, and why does it demonstrate high an extent of variation during the relatively short periods. As Nye and colleagues (Nye, Zelikow, and King 1997, 268) conclude their comprehensive analysis of trust stressing that "at this point we know too little to draw a single conclusion about what

happened to confidence in government (and other institutions) over the past three decades."

In the next chapter I offer an alternative cognitive theoretical framework to analyze the change in political trust over time. The advantage of this framework for the analysis of political trust is that it establishes a nexus between the social-economic and political processes, mass media, and, citizens' evaluations of the "government in Washington", the latter being typically overlooked by the traditional theories of trust.

CHAPTER 4

COGNITIVE THEORY OF TRUST

> Birth control, Ho Chi Minh, Richard Nixon back again; Moonshot, Woodstock, Watergate, punk rock; Begin, Reagan, Palestine, terror on the airline; Ayatollolah's in Iran, Russians in Afghanistan; "Wheel of Fortune", Sally Ride, heavy metal, suicide; Foreign debts, homeless Vets…
>
> Billy Joel (1989) "We Didn't Start the Fire"
> (Major news headlines from 1949 to 1989)

In this chapter, I develop the idea that the short-time variation in trust can be explained by the change in the issue salience at the time of an attitude construction. I begin by discussing the cognitive theories of the attitude representation in memory. By adopting a constructionist perspective, I show how the change in the issue salience may be responsible for the change in the way people judge about the trustworthiness of the government at different points of time. I conclude by discussing the role of the cognitive priming in the changes of political trust attitude over time.

Thinking about the 'Government in Washington'

Analysis of cultural values, government performance and media persuasion theories takes us only part of the way towards solving the puzzle of political trust. I showed above that each of these approaches has its particular shortcomings. There is however, one limitation, which, in my opinion, is idiosyncratic to them all. Searching for political, economic, cultural, or media explanations of shifts in trust they do not take into account the key link in the process of attitude change—the individual. This misplaced research focus has notorious consequences. Reconstructing a dynamic process of the attitude change, political theories of trust put an emphasis on the objective reality, which is

assumed to have a constant effect on the attitudes over time (see Edwards, Mitchell, and Welch 1995). At the same time, people's subjective perception of this reality is typically ignored. Paraphrasing Schuman (1982), emphasizing on the facts, conventional theories of trust ignore the artifacts in the minds of beholders.

Since seminal works of Converse (1964; 1970), scholars of public opinion have been aware that answers to the attitude questions depend on the change in the criteria people use in responding to an issue (cf. Bishop 2005; Schwarz 1993; Schwarz 2007; Schwarz and Bohner 2001; Schwarz and Sudman 1996; Sudman et al. 1996; Tourangeau, Singer, and Presser 2003; Tourangeau and Rasinski 1988; Zaller 1992; Zaller and Feldman 1992) Survey research experiments confirm the idea that the public does not consistently refer to the same issues when evaluating the same objects, as the relative importance of the issues for the public varies with time (see Bishop 2005; Tourangeau and Rasinski 1988; Zaller 1992). Which consideration becomes activated for expression as public opinion about the government might then chiefly depend upon a situation (Zaller 1992).

In Zaller's (1992) influential view shared by many other authoritative scholars, when responding to a question, people do not look for a readily available judgment that has already been formed. Instead, they sample from a pool of numerous considerations that happen to be salient when searching for the response (cf. Fazio 2000; 2007; Fazio et al. 1982; Krosnick, Judd, and Wittenbrink 2005). Thus, people's responses to the attitude questions are heavily influenced by "whatever ideas happen to be at the top of their minds" (Zaller 1992, 76).

Bishop (2005) develops a similar argument throughout his critical methodological study. His explanation for the dramatic surge in trust following

September 11th terrorists' attacks is particularly noteworthy. Prior to the attacks—Bishop argued—people were expressing their low trust in government's ability to manage social issues. After 9/11, citizens started evaluating the government chiefly according to its ability to fight terrorism (see also Langer 2002). Thus, respondents were interpreting the meaning of the unchanged questions differently at two different points of time. Psychologically, Bishop stressed, they were answering different questions. I will return to this point in Chapter 10 and show that people's judgments about the trustworthiness of the government depend on what aspects of the government people are primed to think about.

Experiments show that the "same individual can be found offering different evaluations on different occasions, or even during different parts of a single conversation" (Potter 1998, 244; see also Bishop 2005; Schuman 1982; Zaller 1992). Shifts in the evaluation criteria at the time of making a judgment may explain the well-documented variability in survey responses to the exact same questions asked at the different points of time (cf. Converse's classic analysis, 1970). There is some empirical evidence that responses to the ANES political trust questions are sensitive to the change in the issue salience over time (Citrin and Green 1986; Cook and Gronke 2005; Zaller 1992).

In this chapter, I will take a cognitive-psychological approach to the change in political trust attitude. I will focus on the link typically omitted from the analysis of political trust, i.e. the *public* itself. I will begin by reviewing the theories of attitude representation in memory in order to show that evaluation judgments constructed at any point of time depend on the context in which this process occurs. Next, I will proceed with the discussion how the change in media and real-world cues primes the criteria

people use when they evaluate political objects. Since the literature on political trust attitude priming is scant, I collect relevant empirical evidence from other domains of public opinion research—such as the President's job performance, President and Senate vote intensions, and public policy evaluations—and discuss how these findings could help us understand the cross-time dynamics of political trust.

Attitude representation theories

For a long time—including the period when Converse (1964) wrote his seminal paper on *The Nature of Belief Systems in Mass Publics*—theorists viewed attitudes as the "fixed "things" that sit in memory waiting to be pulled out, used, and put back in place" (Banaji and Heiphetz 2010, 357). This view stems from Allport's (1935) attitude theory, which treated attitudes as stable mental dispositions towards an object, dominated in public opinion research until the cognitive revolution of the 1970s-1980s (cf. Campbell 1962). Hence, the theory is commonly referred to as *dispositional attitude theory*.

Allport (1935) defined attitude as a "mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related" (Ibid., 810). This understanding of attitudes implies their stability to "respond to an object or class of objects in a consistently favorable or unfavorable way" (Fishbein 1967, 257). Such stability was typically attributed to the fact that attitudes are learned constructs located in the long-term memory and activated when the issue or object of the attitude is encountered (Ajzen 2005; Banaji and Heiphetz 2010; Bohner and Wänke 2002; Pratkanis and Breckler 1989). In this case, people's evaluations of the real-world object

would be stored in a long-term memory and retrieved from it whenever they are re-exposed to the attitude object.

Contemporary cognitive psychology does not agree that attitudes always exist in mind as single entities (see e.g. Bassili and Brown 2005; Fazio 2007; Fazio 2000; Fazio et al., 1982; Fazio, Ledbetter, and Towles-Schwen 2000; Fazio and Williams 1986; Krosnick, Judd, and Wittenbrink 2005; Kruglansky and Stroebe 2005; Schwarz 2007; Schwarz and Bohner 2001; Valentino, Hutchings, and White 2002; Wilson and Hodges 1992). As Zaller (1992, 93) puts it, "the notion that citizens have "just one" attitude on typical issues is made to look foolish every time multiple polling agencies become involved in trying to measure public opinion on some issue." The evidence drawn from cross-sectional and especially panel data about the changes in the views about government among the same respondents at different points of time provides an further support to Zaller's theory (cf. Hetherington 1996; 2005; Hetherington and Husser 2011; Hetherington and Rudolph 2011).

The alternative view on the attitude representation in memory—generally referred to as constructionist view—suggests that the attitudes may not be uniquely associated with the attitude objects and therefore may vary in the degree of their stability (cf. Fabrigar, MacDonald, and Wegener 2005; Kruglansky and Stroebe 2005). Already Converse (1964) advocated the idea that political attitudes in the mass public are not constrained, in the sense of being not sufficiently correlated with each other (Granberg and Holmberg 2010). Responses to the attitude questions were so unstable, that Converse questioned the premise that people have meaningful attitudes on social and political issues. This lead him to the conclusion that many respondents were

expressing what he called *nonattitudes*—the random answers to the attitudinal questions constructed on the spot.

Lately, the *constructionist* standpoint has become a prevalent theory of the attitudes construction and change. This view argues that attitudes are constructed at the time of response and therefore are highly sensitive to the relevant social, economic or political context at any point of time (Bishop 2005; Kruglansky and Stroebe 2005; Schwarz 1993; Schwarz 2007; Schwarz and Sudman 1996; Tourangeau and Rasinski 1988) and are potentially adaptive reactions to the environmental demands (Banaji and Heiphetz 2010).

Because of the context-driven variability in attitude reports, the constructionist approach has become prevalent both in cognitive psychology (cf. Krosnick, Judd and Wittenbrink 2005; Kruglansky and Stroebe 2005; Tourangeau and Rasinski 1988) and public opinion research (cf. Bishop 2005; Iyengar 1994; Iyengar and Kinder 1988; J.M. Miller and Krosnick 2000; Schuman 2008; Schwarz and Sudman 1996, Zaller 1992). By now there several competing views on the attitudes' construction have been developed.

Schwarz (Schwarz 2006; 2007; Schwarz and Bohner 2001; Schwarz and Strack 1991) offered perhaps the most radical view on the mechanism of attitude construction. Building upon the theories of situated cognition, Schwarz argued that attitudes are nothing else but on-the-spot constructions. He advanced the idea that the attitudes do not exist in some preformed state in a long-term memory, but are created in a fine-tuned response to contextual demands (cf. Banaji and Heiphetz 2010). Attitudes become crystallized only under circumstances that demand a summary evaluation, such as when a person is asked to express his or her beliefs about politics and politicians in a public opinion survey. When a single evaluative association does not exist in memory,

attitude reports will vary depending on the particular context[13] in which those attitudes are reported. Because the attitudes are contextually determined and constructed on the spot, they vanish shortly thereafter, being replaced by another construction, built largely independently sometime later.

This view is consistent with Zaller's (1992) "belief-sampling" model of attitude construction Zaller stressed that people do not have ready-made responses stored in the memory. When respondents answer attitude question, he argues, their responses are highly influenced by the most salient considerations they have in mind (Zaller 1992; Zaller and Feldman 1992). The salience of these considerations is determined by context at the time of response. Respondents might use the real-world cues—such as state of the economy or national defense issues—to answer the questions, or derive them from the order and wording of survey questions. In contrast to Converse who attributed the problem of attitude instability to the lack of the organized political belief system in the mass public, Zaller saw it in multiple considerations people have about the issue, which leads to the spread of their attitudes in all directions (Park 2010).

Krosnick and colleagues (Krosnick, Judd, and Wittenbrink 2005) criticized both views. Their theory is that a single attitude does exist in a memory, but it represents the net evaluation associated with the object. The observable report of the attitude, they believe, is the integration of evaluative judgments at a given point in time. It may vary due to specific context in which that integration takes place, but the underlying ingredients from which that report is sampled, are relatively stable over time (Ibid.).

[13] My understanding of *context* and *context effects* is consistent with Zaller (1992). In the real world, context represents various informational cues. In survey research, order and wording effects serve as the proxies for these cues.

Fazio (2007; 2000; Fazio et al. 1982) offered a particularly compelling object-evaluation approach to explain the volatile process of the attitude change. He views attitudes as an associative network consisting of different evaluations of the same object. Different contexts may activate different nodes linked to the attitude object and its evaluations in memory (cf. Krosnick, Judd and Wittenbrink 2005; Tourangeau and Rasinski 1988). Therefore, the evaluation judgment constructed at any point of time depends on a particular context in which this process occurs, since different contexts may evoke different integration rules between the nodes. As time passes, the salience of the contextual cues also changes thus affecting the overall evaluation of the object.

At first sight, constructivist theory appears incompatible with the evidence of certain attitudes' stability. However, advocates of the theory argue that it can explain attitude stability as well as malleability (Kruglanski and Strobe 1999; Schwarz and Bohner 2001). According to constructionist view, attitudes remain stable as long as respondents develop similar mental representations of attitude objects at each time, or draw on similar sources of information (Kruglanski and Strobe 1999). This is likely to happen when there is no undergoing change in the information about the object being evaluated. For example, respondent are unlikely to change their attitudes to George Washington simply because they rarely, if ever, encounter any new information inflow. As far as incumbent government is concerned, change in the informational context—and first of all shifts in the national and personal issue salience—may on the contrary change the criteria people use to judge about the trustworthiness of the "government in Washington."

A good—albeit a bit artificial—Illustration to the differences in the attitude construction to the past and incumbent president would be a comparison between the

retrospective and situative presidential approval ratings. Whereas retrospective ratings of the U.S. presidents are typically stable over time (with Washington nearly always being ranked the greatest American president), approval ratings of the incumbent presidents are on the contrary rather volatile. Of course, the primary reason is the difference in the surrounding informational context at the moment of the attitude construction.

In sum, contemporary attitude theories view them as adaptive constructions that change following the shifts in the informational context at the time of response. The salience of contextual cues largely determines which criteria people will use to make their judgments about the attitude objects. In the next sections I will build on this theory and show how the change in the issue domain salience at the time of response may change the standards people use to judge about the trustworthiness of the government.

Change in the issue salience and the volatility of political attitudes

Constructionist view argues that the issues people consider important at the time of response shape their attitudes to the stimulus objects. In order to understand the volatility of responses to the trust-in-government questions, it is therefore crucial to focus on two aspects of the attitude construction process: the issues people are most concerned about- and the degree of importance they place on them when evaluating the government. In order to address these seemingly micro-level problems, I will first turn to the macro-level analysis (Stimson 1999; Erikson, MacKuen and Stimson 2004) to illustrate historical trends in public perception of the nationally important issues.

I begin by clarifying some important terms. Literature typically refers to a set of the issues that draw people's attention at any point of time as "public issue agendas"

(Cobb and Elder 1983; McCombs and Shaw 1972).[14] Throughout this text I will understand public issue agendas as the *degree of public concern about certain issues measured by the public opinion polls*. Whereas the term "public issues agendas" is typically used in public opinion research, particularly in the cognitive priming literature, survey literature typically employs the terms "national importance judgments" or "most important problems' judgments." Notably, all these concepts convey the same idea—the cross-time dynamics of the issue salience in the mass public[15].

By the terms "issues" or "issue domains" I will understand the key societal problems that are "in contention with a relevant public" (Lang and Lang 1981, 451; cited in Soroka 2002). In cognitive psychology, these issue domains represent the categories, activation of which serves to determine the evaluation criteria used to make subsequent political judgments (cf. Iyengar and Kinder 1987).

The relationship between the shifts in the issues' salience and attitude change is certainly no news to the public opinion research. Ever since Converse (1964) coined the term 'issue public', political scientists have dedicated considerable time and effort to explore the mechanism by which certain issue domains become salient for the general public and subsequently set and change "the standards by which governments, presidents, policies, and candidates for public offices are judged" (Iyengar and Kinder 1987, 63).

[14] Throughout this text I will be using the terms *public agenda*, *national importance judgments*, and *most important problems* synonymously

[15] I specifically emphasize here on the cross-time change in the issue importance, due to the low utility of the single-shot studies capturing the degree of the issue salience in the mass public.

The Gallup Organization has been keeping its hand on the pulse of nationally important issues since November 1935. Gallup has been asking respondents the standard open-ended question: *'What do you think is the most important problem facing this country today?'* and ranking reported issues in the order of their salience. I refer to the Gallup's most important problems (MIP) time-series to assess the shifts in the public issue agendas (or the shifts in the issue salience in the mass public) over time. To simplify this task, I limit my analysis to the post-World War II period and focus on the national economy, international and national defense, and civil rights' issue domains (fig 4.1).

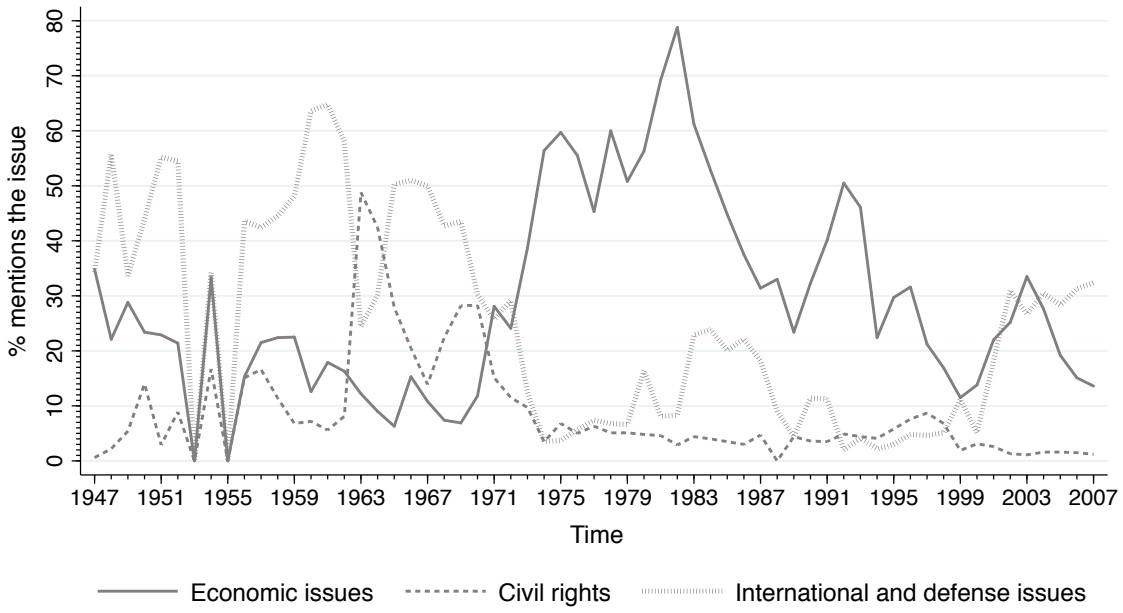

Figure 4.1. Shifts in the most important problems' perception (1947–2007)

Response: What do you think is the most important problem facing this country today? [Open-ended]

Source: Annualized Gallup Most Important Problem series obtained from the Policy Agendas Databank (http://www.policyagendas.org/).

Figure 4.1 shows that public issue agendas are remarkable volatile. At any given moment—very much like Converse (1964) argued almost half century ago—people have just a few issues that are particularly important to them and to which they pay attention. Throughout the last sixty years no two issues have been equally important for the general public at the same point of time: as one issue climbs up on a public agenda, the relative importance of the others declines following the zero-sum game pattern (Zhu 1992).

A stunning 80 percent of respondents considered economy as nation's most important problem in 1982. Just two years later economic problems concerned less than 40 percent of Americans. Americans could not care less about the civil rights in 1962. Not even one respondent out of ten named the issue as America's top problem that year. The following year the issue was mentioned by 60% of those surveyed. Over half of respondents named international and defense problems most important in 1951. Just in two years the issue nearly disappeared from the public agenda[16]. This list could go on and on.

Given these historical changes in the issue salience—the national defense issues in the 1950s and later in the early 2000s; the economic stagnation of the 1970s and the high inflation and unemployment rates in the 1980s; an entire decade of uninterrupted economic growth in the 1990s, the 9/11 terrorists' attacks in 2001, and the worst economic downturn since the Great Depression by the end of the 2000s—it seems very unlikely that the citizens were using exactly the same standards to judge about the trustworthiness of the national government (see Mcavoy 2006). In order to understand

[16] The annualized version of the Gallup MIP data is made available by the Public Agendas project (www.policyagendas.org). The monthly data can be retrieved from the Roper Center at the University of Connecticut: http://tiny.cc/j0a2l.

how the shifts in the issue importance may change the standards people use to evaluate the government I now turn to the cognitive priming theory. Developed on the border of communication studies, cognitive psychology, and public opinion, cognitive priming builds on the idea that the shifts in the national issue agendas and their coverage in the media can structure and change cognitions and attitudes of the audience (Willnat 1997).

Issue priming and shifts in the standards of political judgments

Priming theory, derived from the cognitive-psychological framework, advances the idea that media's greatest impact is in influencing what issues citizens take into consideration, when constructing their attitudes towards the stimulus objects (Kelleher and Wolak 2006). In social and cognitive psychology the concept of priming refers to the impact of the recently activated cognitive constructs on subsequent judgments (Krosnick and McGraw 2002) and has a much broader scope. In public opinion the scope of corresponding research is typically narrowed to the "news priming."

This review will proceed by describing some of the most important scholarship in psychological- and public opinion research into priming effects. Next, I will discuss how the key findings of these works could help us understand the influence of issue priming on political trust attitude in public. I will conclude by drawing some promising lines of research in the domain of political trust, suggested by the previous findings.

The origins of priming theory. Priming theory stems from the studies on memory function in the 1950s. The term itself first appears in Segal and Cofer's (1960) study on how context cues affect the lexical decision tasks that come later in (cf. Bannon 2008). Whereas cognitive psychologists continued to investigate priming to explore memory process, social psychologists began to investigate priming effects in social

contexts, first of all its effect on the impression formation (cf. Bruner 1957). This shift from semantics to attitudes played a pivotal role in penetration of priming research into public opinion literature.

In the early social-psychological research of priming, scholars were priming certain personality traits before eliciting subjects' evaluations of a social target (cf. Higgins, Rholes and Jones 1977; Srull and Wyer 1979; 1980). Using different research designs, primes and stimulus objects studies nevertheless were reaching the same conclusion that information presented in one context can change the way people think about a social target in another context, often unbeknown to a perceiver (DeCoster and Claypool 2004).

Having established that priming of certain personality traits can influence evaluations of the target persons, social psychologists proceeded with developing of more general models of priming and investigating the circumstances and contexts in which priming occurs (see Bannon 2008 for a detailed review). Several key social psychological findings have further benefited political priming research. I will highlight several of them, particularly the frequency and recency effects of primes, assimilation and contrast mechanism of primes, and temporary versus chronic accessibility of the primed constructs. Taken together, these ideas will later help us understand the cognitive mechanism of trust attitude priming.

Srull and Wyer (1979; 1980) demonstrated that priming effect is a dual function of the *frequency* and *recency* of primes. In a series of experiments the authors primed respondents with personality-traits' words "hostile" and "kind." Subjects then read a story including twenty statements about a target person, either immediately after they have been primed, one hour later, or 24 hours later. Srull and Wyer then found out that

the mean ratings of the social target on hostility-related dimension increased with the frequency of the prime and that priming effects also decreased significantly with time. Further, by systematically varying the frequency and recency (position in a sequence) of positive and negative primes

Higgins and colleagues (1985) showed that subjects were consistently making judgments in line with the most recent prime in short delay conditions, but in line with the most frequent prime in the long delay conditions. Later Iyengar and Kinder (1987) in their experimental work on political priming established that frequency of exposure is a more important source of priming effects than recency of exposure (cf. Bannon 2008).

Numerous social-psychological studies have revealed that social judgments are influenced by the extent to which relevant prior information is *assimilated* with or *contrasted* against the judgment target (cf. Higgins, Rholes and Jones 1977; Srull and Wyer 1979; 1980). Depending on the context, primes can be either assimilated with or contrasted against the judgment target. In the first case, primes may be used as a frame, which will guide the interpretation and categorization of the target. In the second case, primes may be used to provide a comparison standard, against which target information is evaluated. Alterations in the wording and order of presentation in either experimental or survey setting, may lead to either assimilation of contrast effects (Haddock 2003), leading Kinder (1998) to conclude that "surveys not only measure public opinion but [also] create and alter it" (Kinder 1998, 813; cited in Haddock 2003).

Stapel and Schwarz (1998) examined how change in the order of question presentation changes people's attitudes towards the Republican Party following Colin Powell's decision not to compete in the 1996 presidential race. Some participants first

indicated the party to which Powell belonged before evaluating the category (assimilation), whereas others indicated which party had made Powell an offer that he rejected (contrast). Stapel and Schwarz (1998) found that attitudes toward the GOP were more favorable in the first situation; that is when Powell was included in participants' representation of the category. Transplanting these findings to the domain of political trust it is entirely plausible that the broad context in which respondents are presented the ANES trust-in-government questions, might influence their attitudes towards the government.

Bargh, Bond, Lombardi, and Tota (1986) made another important distinction between the *temporary* versus *chronic accessibility* of the primed constructs. Chronic accessibility refers to concepts that are always highly accessible from the memory, whereas temporary accessibility is caused by relatively recent activation of knowledge. This idea has an important application to the political trust research. If people's attitudes towards the government are chronically accessible, then content priming may not have a large effect on people's judgments about its trustworthiness. If however, people's attitudes about the government are situative—as constructivist theory argues—then context priming may determine the standards people will be using to evaluate the government.

Broader lessons can further be learned from turning to the analysis of findings derived from the public opinion literature.

Political priming research. In public opinion literature priming is typically viewed as the cognitive extension of the *agenda-setting* process (Iyengar and Kinder 1987b; Iyengar and Ottati 1994; Patrick 2008; for critique see Wanta 1997). Agenda setting refers to the idea of a strong correlation between the emphases that mass media

place on certain issues and the importance attributed to these issues by the general public (McCombs and Shaw 1972). Then, media[17] emphasis on certain issues "influence the standards by which *governments*, presidents, policies and candidates for public office are judged" (Iyengar and Kinder 1987, 63; Italics added). This change in the standards occurs because people tend to weigh the primed issues more heavily when making political judgments.

To further understand the cognitive mechanics of priming, let me briefly return to the constructionist attitude theory, particularly Fazio's (2007; 2000; Fazio et al. 1982) object-evaluation model, which is closely related to the priming theory. Recall that in this model attitudes are viewed as the associative network, consisting of the different evaluations of the same attitude object. Although in theory people could base their evaluations of the government on a wide range of policy domains, in reality this cognitive burden is usually too high. Thus, priming allows people to "satisfice" rather than "optimize" by assessing the government in only a small sample of relevant policy areas, which media shows as important (Edwards, Mitchell, and Welch 1995; Krosnick and Miller 1996; Miller and Krosnick 2000). Iyengar and Kinder (1987, 63) provide an excellent example:

> Our view of President Reagan, for example, might be influenced by his stance on arms control, the vitality of the national economy, his positions on abortion, his judicial appointments, his performances at press conferences, and much, much more. According to the priming hypothesis, should television news become preoccupied with, say, the prospects of nuclear annihilation, then citizens would judge the president primarily by his success, as they see it, in reducing the risk of war. Should television news shift its attention to the economy, citizens would follow suit, now evaluating the president largely by his success, as they see it, in maintaining prosperity.

[17] Originally, priming theory was focusing primarily on the media issue coverage. However, the effects of the issue priming should not be limited solely to the media effects. Non-media informational sources should also be considered as the sources of priming (see e.g. Miller 2007)

Experimental (Iyengar, Peters, and Kinder 1982; Iyengar and Kinder 1987b; Krosnick and Miller 1996; Miller and Krosnick 2000) and survey-based studies (Bishop 2005; Bishop, Oldendick, and Tuchfarber 1984; Schuman 1982; Zaller 1992; Zaller and Feldman 1992) confirm that people's answers to the survey questions reflect the ideas at the forefront of their minds at the moment of answering. These ideas might be *primed* by the questionnaire wording and order effects (see Bishop 2005; Schwartz 1993; 2007; Tourangeau and Rasinski 1988; Tourangeau, Singer and Presser 2003), or by the shifts in the issue salience (see Zaller 1992; Iyengar and Kinder 1987). The latter typically occurs following the objective change in the issues' importance and the shifts in the volume of media attention to the issues.

Historically, public opinion researchers have focused on the effects of priming on presidential approval (Iyengar and Kinder 1987b; Mondak 1993a; Mondak 1993b; Mondak et al. 2004). According to the comprehensive analysis of priming literature made by Roskos-Ewoldsen and colleagues, 23 out of 29 studies appearing in their sample studied the effects of priming on respondents' evaluations of presidential job performance (Roskos-Ewoldsen, Roskos-Ewoldsen, and Carpentier 2008).

A classic study of Iyengar and Kinder (1987) is perhaps the most prototypical example. In their influential book *News That Matters*, which popularized the concept of priming in public opinion research, Iyengar and Kinder showed that people tend to evaluate president's performance based on the issues emphasized by the media. Their experiments suggested robust evidence that shifts in the volume of media attention to the national problems—such as inflation, energy, and national defense—amplify the weight people assigned to the president's performance in these particular issue domains in forming their judgments about him.

A few years later, Krosnick and Kinder (1990) employed a non-experimental design to explore the priming effects of the Iran-Contra scandal on the evaluation of president Reagan's performance. Krosnick and Kinder hypothesized that the revelation of the scandal and dramatic increase in the issue salience might have primed people's attitudes towards American involvement in Nicaragua and hence increased the weight of corresponding attitudes on evaluations of President Reagan's job performance. The authors took the advantage of the fact that the disclosure of the Iran-Contra scandal occurred in the midst of the data collection for the 1986 ANES survey. This enabled them to split the survey sample and compare two groups of respondents—those interviewed before and after the revelation. The findings corroborated their hypothesis. The post-disclosure group was indeed assigning foreign policy issues more weight in their evaluation of President Reagan's performance than the pre-disclosure group did.[18]

Kinder and Krosnick (1990) also explored the moderators of priming effects. They found that the least sophisticated voters were most affected by priming. Yet, later work has found the opposite effect of sophistication (Krosnick Brannon 1993; Krosnick and Miller 1996; Miller and Krosnick 2000).

In a set of subsequent studies Krosnick and colleagues (Krosnick and Brannon 1993; Krosnick and Miller 1996) found additional support for the media priming effects on respondents' evaluations of President Bush's performance during the 1990-1991 Gulf War—the period over which his approval rating jumped more than 20 percentage points. This time Krosnick and Brannon (1993) also pointed toward a more complicated

[18] In a latter study Miller and Krosnick (1996) revealed even more wide-reaching consequences of priming. Particularly, they found that the effect of priming was extending not only on the public judgments of president Reagan's performance, but also on public evaluations of his integrity.

model of priming, suggesting that the strengths of the effects are conditional on respondents' political knowledge. Specifically, they found out that more sophisticated voters were more open to priming.

Miller and Krosnick (2000) went further to elaborate the importance of moderators of priming. They found out that the knowledge facilitates priming among people who trust the media. They attributed the fact that priming effects were stronger among sophisticates to their ability to make inferences from a credible source of information—an important point to which I will return later.

Pan and Kosicki (1997) were perhaps the first to explore the dynamics of priming effects using the real-world data. Using the ANES panel data augmented with the detailed month-by-month content analysis of the media, they showed how a shift in the media attention from the Gulf War to economic recession changed the basis of people's evaluation of President Bush (see Iyengar and Simon 1993 for a cogent argument). Media focus on the Gulf Crisis in 1990-1991 increased the weight accorded to Bush's handling of the Crisis in the overall evaluations of his performance. However, by 1992 people's beliefs about President's handling the economy began to dominate his performance evaluations. This change in the evaluation standards, according to Pan and Kosicki, explains the dramatic fall of G.H.W. Bush approval rating from the record-high (89% in February 1991), to one of the lowest (29% in July 1992) in a matter of just six months (Gallup Presidential Approval Rating no date).

Hetherington (1996) reached a very similar conclusion. Using the ANES data he showed that economic issue priming during the 1992 campaign exerted a significant effect on public candidates' evaluations. Retrospective economic evaluations, Hetherington argued, were important determinants of Clinton and Perot's vote choice.

However, he did not find the same effect of economic evaluations in 1984 and 1988, when economic conditions were much more favorable and the foreign policy issues were more salient.

More recently, priming framework has become an increasingly more popular explanation of change in the evaluations of Congress (Kimball 2005), voting behavior and intentions (Druckman 2004; Hetherington 1996), policy preferences (Willnat and Zhu 1996) and, most importantly, shifts in the judgments about the trustworthiness of the government (see Bishop 2005; Hetherington and Rudolph 2008). However, to date only a few cognitive-oriented scholars have tested the possibility of priming in public judgments about the trustworthiness of the government in a systematic way.

Miller, Goldenberg, and Erbring (1980) were arguably the first to presume that the cross-time variation in political trust may be explained by the differences in the context-level effects people were exposed to. Augmenting the 1974 ANES panel dataset by the front-page content of the national newspapers, they found that the readers of highly critical papers had a lower level of trust. Although the authors did not explicitly examine the possibility of priming, their research suggested that public judgments about the government were indeed sensitive to the informational context people were exposed to at the time of the attitude construction.

Bishop (2005) offered perhaps the first compelling theoretical explanation to the temporal shifts in responses to the ANES trust-in-government questions. He argued that respondents' interpretation of the meaning of the ANES standard questions was changing following the change in the focal historical events. "Even though the wording of the standard NES question on trust in government has been essentially identical for the past forty-five years—Bishop (2005, 137) stressed—a big chunk of its psychological

meaning has shifted… from one historical period to the next." Although this theory is compelling, Bishop did not test it empirically.

Finally, Hetherington and Rudolph (2008) were the first to test the priming hypothesis of political trust attitude empirically. Their analysis was based on the reconstructed aggregate-level quarterly time-series data, which included the measures of presidential and congressional approval, nationally important judgments (economy, international affairs and crime) and public economic sentiments. By including interaction effects in their model—the standard approach to test for the priming effects—the authors concluded that people indeed place more weight on the problems they consider important at the time of the attitude construction when they decide how much they trust the "government in Washington."

Table 4.1 summarizes the findings of most important studies examining the effects of priming on various domains of public opinion in the last three decades.

Table 4.1. Summary of political priming research

Authors	Research method	Independent variable	Dependent variable	Issue	Findings
Iyengar, Kinder, Peters and Krosnick (1984)	Experiment with manipulated media content	Selection of TV news stories	President's job performance	Defense, inflation, energy	Television news programs help define the standards by which presidents are evaluated
Iyengar and Kinder (1987)	Experiment with manipulated media content	Selection of TV news stories	President's job performance	Defense, inflation, energy, arms control, civil rights, unemployment, pollution	"Media" issue priming determines what public considers nationally important issues. These judgments in turn, become more important predictors of presidential approval
Iyengar (1987)	Experiment with manipulated media content	Selection of TV news stories	Explanations of national affairs and president's performance	Poverty, unemployment, terrorism	"News media" cues prime people's reasoning about poverty and terrorism, but do not affect public views on unemployment
Krosnick and Kinder (1990)	Experimental design embedded within survey (ANES 1986 study partitioned into 2 groups)	Iran-Contra scandal revelation	President's job performance	Iran-Contra scandal	Media coverage of the Iran Contra scandal lead to the change in the standards people use to judge about the president and caused a decline in Reagan's popularity
Mutz (1992)	Random sample of Indiana residents (1987 Survey)	Personal unemployment judgments and media coverage of unemployment	President's job performance	Unemployment	High levels of exposure to news about economy decreased the importance of personal concerns to political judgments
Iyengar and Simon (1993)	Survey (1988, 1990 and 1991 ANES) and content data of network news coverage	Media issue coverage	President's job performance	Gulf War	The weight respondents accorded fore-ign policy performance when evalua-ting G.H.W. Bush significantly increased in the aftermath of the Gulf crisis
Krosnick and Brannon (1993)	Survey (1990-1991 ANES)	Media issue coverage	President's job performance	Gulf War	Media coverage of the Gulf War increa-sed the weight people put on the issue when evaluating of President Reagan
Mutz (1994)	National telephone survey (1988-1989) and media content data	Personal unemployment judgments and media coverage of unemployment	President's job performance	Unemployment	Exposure to unemployment news increases the likelihood to hold presi-dent accountable for unemployment

					unemployment
Willnat and Zhu (1996)	Time-series data from 52 weekly polls	Media issue coverage	Public policy evaluations (Hong Kong)	Governor's democratization plan for Hong Kong	Newspaper coverage of governor's reform plan increased relative importance of his proposal in public evaluations of his overall performance
Mendelsohn (1996)	Rolling cross-national sample of 1988 Canadian Election Study	Media issue coverage during the campaign	Vote intentions	Candidate leadership and trustworthiness; opinions on FTA	Shifts in the vote intentions during campaign are explained by the media priming of candidate's characteristics
Goidel, Shields and Peffley (1997)	1992 ANES Panel survey	Media issue coverage during the campaign	President's job performance	Gulf War and economic recession	After the Gulf War media altered the foundations of G.H.W. Bush's political support by shifting the focus from the war to the domestic economy.
Pan and Kosicki (1997)	1990-1992 ANES Panel Study	Campaign effects	President's job performance	Gulf War and economic recession	Decline in the Bush's approval rating was caused by the change in the evaluation standards due to the shift in media attention from Gulf War to economy
Miller and Krosnick (2000)	Assemblage experiment with manipulated media content	"Media" issue coverage	President's job performance	Drugs and immigration; crime, pollution and unemployment	Priming is mediated by the national importance judgments. Political knowledge and trust in the media moderate the strength of priming effects
Druckman (2004)	Election-day exit poll and media content analysis	Issues and images emphasized in the campaign	U.S. Senate vote	28 issues, 11 candidate personal characteristics, and 13 strategic elements (e.g. poll results, ads)	The content of the U.S. senate campaign primed the criteria underlying voters' decisions
Druckman and Holmes (2004)	Experiment and content analysis of the State of the Union Address, and CBS/NYT (2002) special topic survey	Presidential rhetoric	Support for the president	War, terrorism/homeland security, economy	Presidential rhetoric influences presidential approval rating by priming the issues that underlie approval evaluations
Malhotra and Krosnick (2007)	ABS News and the Washington Post surveys (5 samples; February-September	Current and prospective impression about president's ability to handle the issue	Vote intentions	Iraq War, economy and terrorism	1. The impact of president's performance on intended vote choice is mediated by overall approval and prospective

	2004)				evaluations regarding the issue. 2. Increase in the volume of media attention to the issue doesn't lead to stronger priming effects
Hetherington and Rudolph (2008)	Quarterly time-series analysis (1976-2006)	Collective measures of the most important problem judgments	Political trust	Domestic economy	Change in the economic issue domain salience conditions the effect of economic performance on trust

Review of political priming literature suggests that despite of the variations in research designs there is fairly robust evidence that media priming affects the standards people use to make political judgments. If we stretch the existing evidence to political trust research, we may see similarly important results. Despite the scant literature, this venue of research seems promising to advance our further understanding of the temporal dynamics of trust.

This review has also outlined potentially promising lines of inquiry, which, I think, might benefit political trust literature. Most importantly, current literature provides a very scant understanding of causal relationship between the shifts in the priming issue agendas, changes in public judgments about the government, and circumstances under which these changes occurs. Therefore, in the remainder of this chapter I will focus on the cognitive mechanism of trust attitude priming and contingent conditions that moderate the strength of the priming effects.[19]

How does the change in trust occur: the cognitive mediators of priming. Although researchers have some empirical evidence that change in the issue salience may explain the change in the standards of public evaluations of the government, the cognitive mechanism underlying this process remains unclear.[20] The first study on the media affects—the original research by McCombs and Shaw (1972)—only reported a correlation between media- and public issue agendas, but it stretched an assumption that the former causes the latter. Past forty years since the seminal McCombs and Shaw study, public

[19] Notably, priming itself is the proposed moderating and mediating variable in broader psychological phenomena (cf. Bannon 2008).

[20] By "cognitive mechanism" I understand a psychological account of how the change in the priming issue agendas on the macro level takes place "within the individuals" and alters the standards they use to make their political judgments (see Zhu and Blood 1996).

opinion literature still does not draw a complete picture of the "successive steps a piece of information must take in order to become an ingredient of some political judgment" (Marquis 2007, 187). In this section I will build on the existing literature in order connect all links of the priming chain—shifts in the informational context, corresponding change in the national importance judgments in the mass public, and shifts in the ingredients of government evaluations—in the same causal nexus.

Cognitively minded public opinion scholars (see e.g. Zaller 1992) have long been arguing that the path to the attitude change is a "chain" punctuated by a series of mediators (Marquis 2007). Each of these mediators is conditional on the fulfillment of the path that precedes it. Until recently however, the cognitive mediators at play during attitude priming process remained largely unspecified (Roskos-Ewoldsen, Roskos-Ewoldsen, and Carpentier 2008). Lately, two theories proposed alternative cognitive mechanisms of priming. However, applied to political trust research, these two theories suggest a different understanding of the priming mechanism. Therefore, it is important to understand which theory draws a more realistic model of trust attitude priming.

Much work in psychology concludes that priming occurs through the short-term change in the construct *accessibility*—the ease with which the relevant judgments are retrieved from the memory (Arpan, Rhodes, and Roskos-Ewoldsen 2007; Roskos-Ewoldsen, Roskos-Ewoldsen, and Carpentier 2008; Zaller 1992; Zaller and Feldman 1992). Proponents of the accessibility mechanisms argue that *recently* and *frequently* activated concepts come to mind more easily than concepts that have not been activated by the prior stimuli. By focusing on a few issues at a time, media cue the public about the importance of certain issues, which people then refer to when making

their own judgments. Scheufele and Tewksbury (2007, 197) provide an illustration of the cognitive accessibility mechanism function:

> First, a media message renders one or another construct applicable, and that construct—say unemployment—is activated. By virtue of its activation, that constructs remains temporarily accessible. Subsequently, when a person is called on to evaluate the performance of the president, unemployment is likely to be activated. Unless screened out as inapplicable in this evaluation, it will be used as a basis for making a judgment [...] of presidential performance.

The accessibility model of political attitudes priming received substantial criticism from the cognitively oriented public opinion scholars. News media priming—they argue—typically occurs over much longer periods of time than psychological experiments on priming. Therefore, the assumption that media priming is mediated by accessibility—Bannon (2008) stressed—neglects much of the findings of psychologists in the last three decades. Recall, that cognitive- and social-psychological research almost unanimously showed that increased accessibility quickly decreases in time. If accessibility was indeed mediating news media priming, than the recency priming postulate would simply become implausible in the public opinion context.

In their milestone paper, Miller and Krosnick (2000, 302) raised another concern about the idea that accessibility underlies political attitudes' priming. Because the primed constructs are activated automatically, this unanimated process would make people the "victims of the architecture of their minds" (Miller and Krosnick 2000, 302). If this were the case, then the news media would have a very troublesome power over people (Iyengar and Kinder 1987).

Whereas media coverage of an issue indeed increases the cognitive accessibility of related beliefs, this is not what Miller and Krosnick believe produces priming. Instead—they argued—news media priming occurs because people are able to make conscious *inferences* from the information that they receive. Miller and Krosnick (2000)

argued that mass media makes explicit statements about the nationally important issues often enough for the people to infer that the issue is salient and begin weighing it more heavily when evaluating the president,[21] Speaking allegorically, "individuals learn how concerned they should be through the amount of coverage the issue receives" (Wanta 1997, 2).

According to the inference model, increase in the media issue coverage should produces a change in the "mediating variable in the minds of citizens"—the national importance judgments, which in turn, changes the weight people put on the issue when making political judgments (Miller and Krosnick 2000, 301-302). This theory makes intuitive sense. If the issue is salient for the public, it will be indeed natural and, as the authors put it, even *responsible* for people to weigh this issue more heavily when evaluating the government. Empirical tests conducted by the authors confirmed that the national importance judgments in the general public indeed *mediated* the priming of political attitudes.

Apart from its substantial theoretical importance, the inference model of priming had important methodological implications. Particularly, it alleviated the need for lab experiments in priming research. If priming is indeed mediated by the nationally important judgments, then it can be investigated by tracking public perception of the nationally important issues over time and examining their effect on political evaluations on the micro- and macro-levels (see Hetherington and Rudolph 2008).

Apart from the original Miller and Krosnick's (2000) study, few other public opinion scholars have empirically investigated the cognitive mechanism of news media

[21] For critique of Miller and Krosnick (2000) see Roskos-Ewoldsen, Roskos-Ewoldsen, and Carpentier 2008; Roskos-Ewoldsen and Roskos-Ewoldsen 2009.

priming.[22] Again, Hetherington and Rudolph (2008) were the first to extend the inference model of priming to the domain of political trust. By modeling an interaction between the national importance judgments and economic sentiments on the macro level, they concluded that when public considers economic matters more salient, economic perceptions become more important ingredients of public judgments about the government. However, their methodological approach, while producing valuable theoretical advances of its own kind, did not answer the question about the cognitive mediators at work. Because the authors included an interaction effect in the model, they actually explored the moderation relationship between the increase in perceived issue importance and the weight people place on this issue domain when evaluating the government. While the moderation effect indeed suggests that people put the greater weight on the primed issue domains when they decide whether the government is or is not trustworthy, it does not shed light on the cognitive mechanism responsible for the trust attitude priming.

It is remarkable that even the original Miller and Krosnick (2000) research has some important limitations when it comes to the mediation hypothesis they had tested. First, their test was based on the non-representative student sample. Whereas the authors addressed the question of generalizability of their findings, it is not clear whether the mediation hypothesis would be confirmed when using a different methodology, such as the time-series analysis of the cross-sectional data representing multiple time-points and augmented by the measures of the issues' salience.

Second, and more important, Miller and Krosnick (2000) tested the mediation hypothesis using the Baron and Kenny (1986) "causal steps" approach. Following this

[22] In fact, as Malhotra and Krosnick (2007) showed, in most public opinion studies, including *The American Voter*, hypothesized mediational pathways were rarely, if ever, tested empirically.

then-standard procedure, they first estimated the effect of the independent variable (issue coverage) on the mediator (national importance judgments), and then modeled the effect of the mediating variable on the dependent variable (president assessments). Subsequent research identified some important limitations of this approach (cf. Krause et al. 2010).[23] Therefore a more stringent structural equation modeling approach, which estimates the relationship between all variables simultaneously rather than assumes that equations 1-3 are independent, may be further required to properly address the mediational hypothesis Miller and Krosnick (2000) have offered. Furthermore, it is not clear whether the mechanism observed by Miller and Krosnick would hold over longer periods of time.

In sum then, in order to test whether priming indeed affects public judgments about the trustworthiness of the government in Washington it is important to specify the causal mechanism of this effect. Further investigations of the mediational pathways between the shifts in the issue priming and changes in pattern of responses to the ANES trust-in-government questions should in turn either corroborate or debunk theoretical presumptions offered in the past.

When trust attitude priming occurs: moderators of the priming effect's strength. Another key question not fully addressed in the literature is whether the effects of priming are universal or only happen under certain conditions. And, if the latter is true, which circumstances may enhance or inhibit priming effects on public judgments about the trustworthiness of the government. In this section I will discuss some key

[23] Even Kenny (2007) has recently amended his recommendations for testing mediation.

moderators of priming effects—the variables that condition (that is either enhance or inhibit) the effect of priming on public political judgments.

Two lines of research are present in the literature (for detailed reviews see Marquis 2007; Miheye 2007). Traditionally, most studies have been focusing on the individual-level moderators of priming, such as the age, education, political knowledge, partisanship, interest, and trust in the media source to mention but few (Iyengar and Kinder 1987; Krosnick and Kinder 1990; Miller and Krosnick 2000). While these factors do explain some variability in the individual-level susceptibility to the priming effects, Zhu and Blood (1996, 117) tell us that "we probably should not overstate the differences too much." Although in light of the more recent studies (cf. Miheye 2007) this conclusion might look preliminary, I nevertheless focus on the alternative line of research, which appears more consistent with the focus of my research interests.

This alternative line of research focuses on the macro-level moderators of priming. Within this approach, I limit my attention on two possible moderators of priming—characteristics of the primed issue and the volume of media attention dedicated to an issue.[24]

Several studies have discussed the role of the issue characteristic as the possible moderators of priming. The "issue obtrusiveness" typology introduced by Zucker (1978) may be particularly applicable to political trust research, as it explicitly deals with two issue domains—economy and international/defense—salience of which is presumed to exert an effect on trust.

According to Zucker, an issue is obtrusive if the public has direct experience with it. Correspondingly, the unobtrusive issues are those with which people do not have

[24] In the lab-experiments the latter is also operationalized as the "amount of exposure".

direct contact. Domestic socioeconomic issues, such as inflation, unemployment or crime can be the examples of the obtrusive issues, whereas foreign affairs and defense issues are considered unobtrusive issues (Zhu and Blood 1996). Priming effects appear to be stronger for the unobtrusive issues, as the citizens have to rely solely on the media to learn about these issues. On the other hand, people are less susceptible to the unobtrusive issues, since they also learn about these issues from the "real-world," first of all, from their own experiences and interpersonal communication (Mackuen and Coombs 1981).

Although public opinion scholars generally found support for the obtrusive contingency theory, collected empirical evidence also raised some questions. For instance, inflation and crime—the issues believed to be obtrusive—were often found to have strong priming effects on political attitudes. Moreover, Erbring, Goldenberg and Miller (1986) argued that personal experience might on the contrary, enhance rather than inhibit priming effects. Their data showed that priming effects were conditional on the individual level of attention to the issue. They found that the effects of unemployment were stronger among the unemployed respondents. In a similar way, Iyengar and Kinder (1987) found that priming effects of the social security issues were stronger among the elderly people.

Until now, we have limited understanding whether the issue obtrusiveness will condition the priming effects on political trust. Although theory suggests that trust in government is a response to the change in the economic (obtrusive) and international and defense (unobtrusive) issues' salience, the priming effects of these two issue domains have never been tested and compared in the same model. Hetherington and

Rudolph (2008) estimated the priming effect of economic issues on political trust, but they did not include the international and defense issues' priming in their design.

Although they did not focus on the priming effects, Chanley, Rudolph and Rahn (2000) on the contrary found significant effect of crime and economic perceptions on political trust, but failed to reject the null effect hypothesis for the international issues. In a subsequent study, Chanley (2002) found significant effect of perceived importance of economic and crime issues on trust. Although in one of the presented models the effect of economic issues on trust was found significant, Chanley operationalized economic issue importance as consumer sentiment index rather than perceived national importance of economic issues in public—the approach Hetherington and Rudolph (2008) took. This of course, raises questions whether the measure of national importance judgments (international and crime issues) may capture the same extent of the issue salience as retrospective and prospective economic evaluations (consumer sentiment index).

In sum, variations in the context of the priming issues might explain the ebbs and flows of political trust over time. Therefore, it may be important to further address the question whether priming of economic and international/defense issue domains have differential effects on political trust attitude.

Another macro-level moderator of priming often discussed in the literature is the level of exposure to the priming message (in the lab-experiments) or the volume of media attention to the issue (in the survey-based studies). Stoker (1993, 965) argues that the "attitude change will be conditioned by the degree of exposure to change-inducing information." Although one might be inclined to think that this seemingly elementary *dosage-response* relationship between the priming issue agendas and

attitude change has been extensively researched in the past, analysis of the literature suggests otherwise. According to Malhotra and Krosnick's (2007) comprehensive literature review, in most empirical studies the conclusion that the increase in the volume of media attention to the issue produces larger priming effects was an analytical leap made by the investigators that was not backed up by the research evidence. Let us further investigate the state of the problem.

Priming theory suggests that the increase in the change-inducing information should increase the effect of respective issue domain when people make judgments about the trustworthiness of the government. Malhotra and Krosnick (2007, 264; italics in the original) emphasize that it might not be "merely the presence of news media coverage that causes priming, but the *amount* of priming is supposed to increase monotonically with the *amount* of coverage." The direction of this relationship is apparently consistent with the theory. Yet, even the most often-cited public opinion studies conducted in the laboratory or in the field have failed to confirm this relationship hypothesis empirically.

In their famous lab experiments, Iyengar and colleagues (Iyengar, Kinder and Peters 1984) consistently found that there was no variation in the priming effects depending on whether participants saw a moderate or a large amount of the issue coverage. Any amount of coverage was sufficient to induce priming. In a more recent study using survey data, Malhotra and Krosnick (2007) similarly disconfirmed the dosage hypothesis. Earlier however, Krosnick and Brannon (1993) unexpectedly found stronger priming effects among individuals who were *less* exposed to the media than among those who were more exposed to it. To confuse the matters more, using time-

series data obtained from 52 public opinion polls in Hong Kong, Willnat and Zhu (1996) corroborated the dosage hypothesis.

Other studies in the field have never explicitly tested the dosage hypothesis. For instance, in the seminal Kinder and Krosnick (1990), Miller and Krosnick (2000) and Stoker (1993) analyses, the amount of participants' exposure to the information was kept invariant.

Finally, in the most recent meta-analysis of the priming literature, Roskos-Ewoldsen and colleagues (2008) found mixed support for the widely believed dosage hypothesis that the media primes should become stronger when they are of a great intensity. Thus, as Malhotra and Krosnick (2007, 265) put it, "some of the most visible tests of the dosage hypothesis have failed to confirm it, calling into question the language so often used to describe priming effect in print."

In light of the present state of the literature it is unclear whether the dosage-response relationship between the issue priming and attitude change even exists. However, if the volume of media attention to the problem (or the magnitude of the issue salience for the nation) indeed predict the corresponding variation people attach to this domain when judging about the trustworthiness of the government, then we may be able to further explain the temporal dynamics of political trust, and particularly the abrupt increases and drops in the levels of trust.

Chapter summary

In this chapter I discussed the cognitive framework to explain the temporal change in public judgments about the trustworthiness of the government. I built on the research of the cognitively oriented political scientists showing that the answers to the attitude

questions—such as the ANES trust-in-government scale—may depend on the change in the criteria people use in responding to an issue. Contemporary research on attitudes and their representation in memory disconfirms the view of the attitudes as fixed dispositions and suggests that attitudes are constructed "online" in a fine-tuned response to contextual demands.

Priming theory developed on the border of communication studies, cognitive psychology and public opinion research suggests that the change in the media attention to the issue domain should increase the weight people attach to this issue when making political judgments. I build further on the research on priming to demonstrate how the changing importance of certain issue domains may force the public to weight these issues more heavily when evaluating the government.

My particular interest in this chapter is the cognitive mechanism of priming. I build upon Miller and Krosnick (2000), who suggest that the national importance judgments can serve as the mediators of priming. However, as this assumption has not been yet empirically tested in the political trust literature, it necessitates further analysis.

Apart from the analysis of cognitive mediators of priming, I discussed the moderators of this phenomenon—that is the variables that condition the impact of priming issue agendas on trust. Whereas most research focuses on the individual-level variables, I entertained the possibility that the increase in the media attention to certain issues should predict the corresponding variation in weights that the public attaches to these issues when judging about the trustworthiness of the government.

CHAPTER 5

RESEARCH HYPOTHESES AND RESEARCH DESIGN

> At this point we know too little to draw a single conclusion about what happened to confidence in government (and other institutions) over the past three decades
>
> Nye, Zelikow and King (1997, 268)

In this chapter I further discuss the two unresolved questions in political trust research: the cognitive mechanism of priming and the mediators of priming process. Building on the theory of cognitive priming I offer the research hypotheses and present the analytical approaches I will take to test the hypotheses

Research hypotheses

The present study focuses on three unresolved questions in political trust literature. The first question is: *How does trust attitude priming occur*? More specifically, what is the underlying mechanism of trust attitude priming? The present study sets to explore the causal relationship between the change in the issue salience and public judgments about the trustworthiness of the government with the special emphasis on the cognitive mediators of this relationship.

The second question is: *When trust attitude priming occurs*? Particularly, which contingent conditions moderate—that is either enhance or inhibit—the strength of the priming effects? In this study I will focus on the macro-level moderators of priming, particularly on the dosage of media attention to the issue, and issue obtrusiveness' characteristics.

The third question is: *What are the consequences of trust attitude priming?* If the change in trust occurs through the change in the standards people use to judge about

the trustworthiness of the government, then people will be thinking about different parts of the government—economy, defense, or social welfare—at each point of time. It is then possible that changes in the issue salience will affect political attitudes and preferences that political trust shapes.

Greater focus on the mechanism of trust attitude priming, circumstances under which priming occurs, and implications that it has, would provide a better understanding of the process of priming and give more focus to theory building, which has been scarce in the literature on political trust.

How priming occurs? I begin by describing a causal mechanism by which the shifts in the priming issue agendas may alter public views about the trustworthiness of the government in Washington. I put into a single mediational framework three key parts of the priming process—agenda setting, cognitive inference and issue priming, which until now, have not be examined in a single-step mediation analysis.

Following the line of the research established by Krosnick and colleagues (Malhotra and Krosnick 2007; Miller and Krosnick 2000) I expect that this effect of the priming issue agendas on political trust would occur through the change in the *mediating* variable "in the minds of citizens" (Miller and Krosnick 2000, 302)—perceived issue importance. The following hypothesis is hence offered:

H1: *Shifts in the public judgments about the trustworthiness of the government occur through the change in the national importance judgments, which people infer from the news media and the real-world indicators of the issue importance.*

The present research proposes a single-step mediational analysis to test the offered hypothesis:

National and media issue agendas (X) ➔ national importance judgments (Z) ➔ judgments about the government trustworthiness (Y).[25]

From statistical standpoint the relationship between the dependent variable Y and independent variable X is mediated if the intervening variable Z changes the impact of X on Y (see Baron and Kenny 1986). Therefore, in order to confirm the offered mediation hypothesis two partial hypotheses—corresponding to the *inference* and *priming* parts of the general hypothesis *H1*—should also be confirmed.

First, the change in the priming issue agendas—the real-world indicators measuring the objective degree of severity of a problem in a nation, and the volume of media attention to the problem (X)—should predict the national importance judgments (Z)—the degree of public concern about these issues measured by the public opinion polls. Second, the shift in the national importance judgments (Z) should produce a significant effect on public judgments about the trustworthiness of the government (Y).

Note that these steps actually refer to the two consecutive stages of the same cognitive process. In the previous research, the relationship between these two steps was established based on the two-step Baron and Kenny (1986) procedure. I will take another analytical strategy and test the relationship between the links in the priming process' chain in a single mediation model.

In order to confirm the mediation hypothesis, one more assumption should be met. Not only the direct effect of the mediating variable (Z) on the endogenous variable (Y) should be statistically significant, but the size of this direct effect should also be stronger than the size of the indirect effect of the exogenous variable (X) on trust (Y). If

[25] Strictly speaking, confirmation of the offered mediation hypothesis does not allow concluding about the presence of the effect of cognitive priming on political trust. In order to confirm the latter, one needs to establish whether the variation in the media issue priming explains the corresponding variation in the weight, people attach to this issue domain when evaluating the government. From statistical standpoint, this requires testing of the moderation rather than mediation hypothesis. For distinction between the mediation and moderation effects see Baron and Kenney (1986).

the latter assumption does not hold, than the national importance judgments could not be claimed to amplify the effect of the news media and real-world indicators of the issue salience.

Figure 5.1 describes proposed mediation hypothesis schematically:

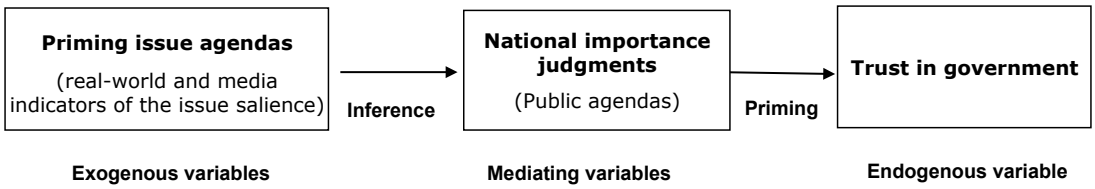

Figure 5.1. Research hypotheses *H1*

I will test the offered hypothesis empirically in chapter 8.

When priming occurs? Based on my review of political priming literature, I anticipate that priming effects are not universal and may be conditioned by certain micro- and macro-level variables. I will explore this possibility empirically.

First, I refer to the *dosage hypothesis* discussed in details in the previous chapter. Recall that priming occurs when media attention to an issue causes people to put more weight on this issue domain when making judgments about the trustworthiness of the government. I anticipate that the change in the volume of media attention to certain issue domains over time should predict the corresponding variation in the weight people attach to these issues when constructing their attitudes to the national government. The following hypotheses are offered:

> ***H2****: When the issue domain is not primed in the media—that is, the issue receives its normal volume of media attention—people will place no additional weight on this issue when they judge about the trustworthiness of the government*

In other words, the effect of the issue on the judgments about the trustworthiness of the government will not be significant unless this issue domain is primed in the media.

> ***H3****: When the media attention to the issue domain increases—that is the issue becomes primed by the media—this will increase the weight people attach to this issue when judging about the trustworthiness of the national government*

The proposed hypotheses imply that the relationship between the national importance judgments and political trust is *moderated* by the volume of attention this issue receives in the media (media issue priming*national importance judgments ➔ judgments about the government trustworthiness). Figure 5.2 provides a schematic illustration of the priming hypotheses.

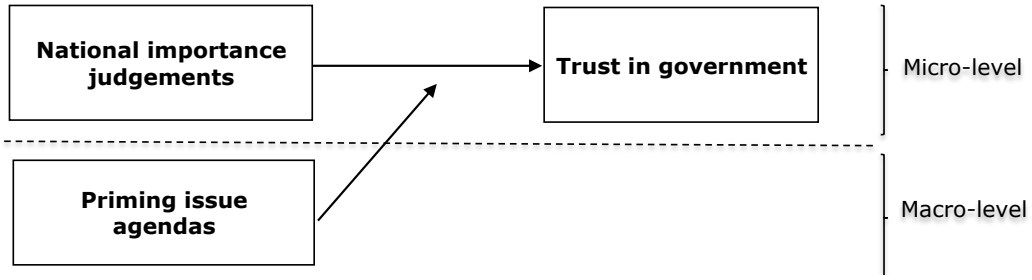

Figure 5.2: Research hypotheses *H2* and *H3*

From statistical standpoint, the volume of media attention to the issue moderates the *slope* of the relationship between the national importance judgments and political trust attitude (fig. 5.2). This moderation effect is represented as the cross-level interaction between the measure of the issue priming on the macro-level and perceived national importance of this issue on the micro-level. If the interaction effect turns to be significant, this would entail that the increase in the media issue priming predicts the corresponding

variation in the effect people attach to this issue when they respond to the ANES trust questions at different points of time[26].

I now turn to the *issue obtrusiveness hypothesis*, which suggests differential priming effects of the different issue types. I anticipate that:

> ***H4****: Shifts in the international and defense issue agendas will exert stronger priming effect on public judgments about the trustworthiness of the government, compared to the shifts in the economic issue agendas.*

I will test the offered *issue obtrusiveness hypothesis* alongside with the dosage hypothesis. In order to confirm hypothesis *H4,* I will first calculate what I will call the *thresholds of priming effects' significance*—the increase in magnitude of the media attention to international/defense and economic issues domains required to produce priming effects on public evaluations of the government. Next, I will estimate the magnitude of produced priming effects by calculating the change in the effect of the national importance judgments on trust following one percentage point increase in the media attention to economic and international/defense issues.

I will test hypotheses *H2-H4* in Chapter 9.

What are the consequences of trust attitude priming? So far, I have discussed how the shifts in the priming issue agendas may affect people's judgments about the trustworthiness of the government. However, change in the criteria people use to decide whether the government can be trusted and to what extent, may have important attitudinal and behavioral consequences (see Chanley, Rudolph and Rahn 2000; Hetherington 2004; Rudolph and Evans 2005). By acting as a powerful heuristic trust can shape a range of

[26] If course, in the ideal design, the mediation and moderation hypotheses would be tested in the same moderated mediation model (see Preacher and Hayes 2008). However, due to the complexity of research design and data limitations, this approach is not feasible.

political attitudes and policy preferences; most importantly, on public support for distributive spending on such issues as social security, race, crime prevention, education, environmental protection, and national defense to mention a few (see e.g. Hetherington 1996; 2004; Rudolph and Evans 2005). The utility of this "trust heuristic" however, may vary across situational contexts. Therefore, it is possible that shifts in the criteria people use to evaluate the credibility of the government, may also change the strength of the effect of trust on related political attitudes and public policy preferences.

Consider several examples. When the salience of international and national defense issues increases, trust may exert stronger effects on the policy preferences related to this issue domain, like defense spending preferences. Likewise, trust in government may demonstrate stronger influence on the economy-related policies when people express most concerns about the economic issues. By the same token, when the welfare and civil right issues climb up on the public agendas, trust might have stronger effects about the welfare- and race-targeted initiatives of the government.

Since the degree of issues' importance varies over time, I expect to find variability in the effect political trust exerts on the attitudes and policy preferences related to a particular issue. Speaking more methodologically, I anticipate that the change in the issue domain salience will *moderate* the effect of trust on corresponding attitudes and policy preferences. The following hypothesis is hence offered:

> ***H5****: Change in the issue domain salience will moderate the effect of political trust on attitudes and policy preferences attached to this issue domain*

Figure 5.3 provides a schematic illustration of the hypothesized moderating effect of trust.

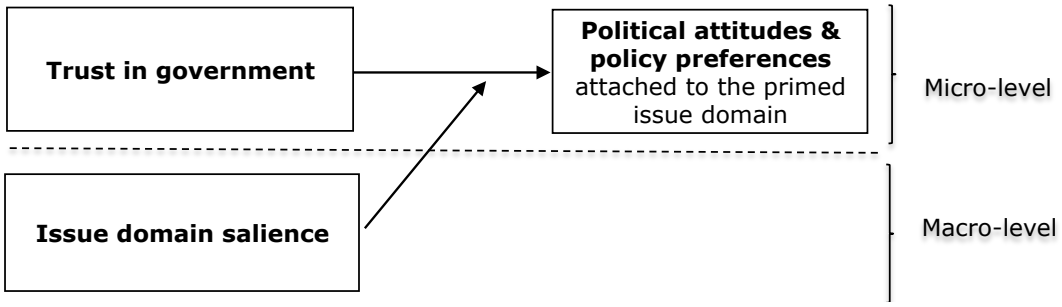

Figure 5.3: Research hypothesis *H5*

I will test this hypothesis in Chapter 10.

Together, test of the research hypothesis *H1–H5* should provide a comprehensive answer to the general research question this dissertation is set to answer: whether priming effects can explain the shifts in the public judgments about the trustworthiness of the government.

Research design

In the forty years since McCombs and Shaw's (1972) original study on media effects, scholars have adopted several research designs to explore political attitudes' priming (see Hayes, Slater and Snyder 2008 for the extensive review). It is necessary to briefly discuss available research techniques and strategies in order find the optimal research design for my empirical investigation.

The first design was the *panel design with cross-lagged correlations* McCombs and Shaw (1977) employed in their Charlotte Study. This analytical strategy compares the correlations between the public agenda at time *t* and media agenda at time *t-1*, with the correlation between the media agenda at time *t* and public agenda at time *t-1,* in order to investigate whether media agendas influence public agendas at the later point, or vice versa (Zhu and Blood 1996). Since the cross-lagged design provides a fairly

straightforward way to establish the causality between the variables, it was later adopted by many other studies (Weaver 1981; Weaver et al. 1981). However, this design—simplistic in many ways—has several important limitations. Most importantly, it does not detail the cognitive mechanism of priming.

Much support of the cognitive priming theory comes from the *lab studies*. Iyengar and Kinder (1987) were perhaps the first students of public opinion to adopt the experimental design to explore priming effects on the individual level. In a series of controlled experiments, subjects watched television news priming inflation, unemployment and national defense issues. Next, the researches compared perceived importance of these issues among the viewers with the non-viewers and established the strong priming effects of the media—viewers attached much higher importance to these issues when evaluating the president. The major problem with this design is external validity of the results. While providing strong evidence for the priming effects among the subjects, lab experiments cannot validate the actual priming effects on public opinion, since the priming effects found in laboratory may be generated by unrealistically intensified stimuli in the non real-world conditions. Obviously, the experimental design is not feasible for the present research.

A number of scholars have used *cross-sectional time-series* and *panel data* designs to study priming effects. Erbring, Goldenberg and Miller (1980) employed the 1974 NES study, which included an extensive set of questions designed specifically to tap respondents' media usage habits and augmented these data with the media content several weeks prior to the interviewing period. Krosnick and Kinder (1990) used the data from 1986 to examine the effect of Iran-Contra scandal coverage on perceptions of President Reagan. The authors took the advantage of the fact that the disclosure of the

Iran-Contra scandal occurred right in the middle of the ANES survey and compared the respondents interviewed before and after the disclosure (Willnat and Zhu 1996).

Iyengar and Simon (1993) used the NES 1988-1991 panel study to analyze the effect of respondents' opinions and beliefs about the economy and foreign policy on respondents' assessment of presidents Reagan and Bush. Hetherington (1996) employed the ANES 1984-1992 cross-sectional data to analyze the effect of economic and foreign issues' salience on the vote intentions.

In all these studies, researchers discovered substantial priming effects on people's evaluations of the executive. This approach—while generalizing priming effects across population—also has several limitations. By focusing on one or a few data points, the researchers ignore the larger time frame, which does not allow generalizing the priming effects over time. Additionally, this approach typically excludes "real-world" indicators from the analysis and operationalizes issue priming as the magnitude of issue domain salience among the respondents (but see Erbring, Goldenberg and Miller 1980).

The *macro-level time-series approach*—the method enjoying particular popularity in the analysis of political trust cross-time dynamics (see e.g. Chanley 2002; Chanley, Rudolph and Rahn 2000; Keele 2003; 2007; Hetherington and Rudolph 2008)—remedies one limitation of the cross-sectional design. Specifically, it allows generalizing findings over longer time-periods. Time-series design also typically involves many more time-points than any cross-sectional design and is therefore more sensitive to the short-term fluctuations in the priming issue agendas. However, it does not allow stretching the aggregate-level conclusions to apply to individuals.

Structural equation modeling (SEM) techniques have also been employed in the past to test the causality of priming effects (Zhu and Blood 1996). Holbert and Stephenson (2003) argue that SEM approach allows for more efficient assessment of the causal paths of priming (particularly, the mediation effects), and its direct and indirect effects. Besides, it can decompose measurement error from the analysis. Iyengar (1989) and Kosicki (1993) stress that application of the SEM methodology has potential in advancing priming research. The disadvantage of the SEM approach is that—until recently—it did not have a possibility to analyze the multilevel and longitudinal data. However, in the last few years SEM methodology has evolved into a more versatile tool for the analysis of longitudinal and time-series designs and can now account for the variation on both micro- and macro-levels simultaneously. A particularly appealing feature of the SEM framework is its ability to analyze mediational relationship between the variables. These factors make SEM a very promising venue for priming research.

In the recent years, researchers have begun to utilize *multilevel or hierarchical designs* in the priming research (see special October 2006 issue of *Human Communication Research*). When data are organized hierarchically—that is when individuals are nested within units, such as time-points—multilevel design is a more appropriate strategy than OLS regression. One of the key abilities of this design is its ability to take into account the "real-world" indicators of issue importance and media attention to this issue (Park, Eveland and Cudeck 2008). The advantage is that by collecting data at the macro-level, researchers can test implied cross-level interactions between the individual- and macro-level variables to test a wide range of hypotheses.

However, in spite of many advantages, this methodology has not yet been widely used in either communication or public opinion research (Park, Eveland and Cudeck 2008).

Having discussed the "realistic" designs of the priming research, it may be important to focus on the "idealistic" approach to test the offered priming hypotheses. As Willnat and Zhu (1996) argue, an ideal design to investigate priming effects would require within-subjects design of data collected over an extended period in a natural setting augmented with measures of media content. Holmberg (1999, 120) similarly advocates this design for the research of political trust dynamics. In a proper investigation of political trust, he argues, "a theoretical model should be specified, with indications of direct and indirect causal links, and tested cross-sectionally on the individual level as well as across time on the aggregate level." Indeed, proper investigation of priming effects requires an analysis conducted simultaneously on the micro- and macro-levels and over time. Also, due to the nature of trust in government attitude scale, it is important to decompose measurement error from the analysis. The measurement issue has been consistently neglected in the previous research, but—as I will show later—it may have a crucial impact on findings.

Therefore, I suggest a multilevel time-series cross-sectional design and SEM analytical approach to tackle the problem.[27] Instead of focusing on a single level of analysis, I will model the variation in political trust simultaneously on the micro- and macro levels at each point of time in the analysis as well as over time. The advantage of the approach that I take is that it allows testing for the mediational relationship on the macro-level as well as to assess the moderation hypotheses by modeling cross-level interaction terms. Throughout my research I will use the ANES time-series cross-

[27] I depart from the SEM methodology in Chapter 10, where I use the random effects multilevel design.

sectional data (1964-2008), and augment these data by the macro-level variables capturing the real-world and media indicators of the issues' importance as well as perception of their importance by the mass public.

I turn to the empirical investigation of the dynamics of political trust after discussing the measurement of the core variable in my analysis, i.e. political trust construct. In the next two chapters, I focus on the operationalization and measurement of political trust attitude and test whether it can be meaningfully compared over time. The latter is an important prerequisite of a time-series cross-sectional analysis.

PART II

MEASUREMENT

CHAPTER 6

SURVEY MEASUREMENT OF TRUST IN GOVERNMENT ATTITUDE

> There is one finding that is seemingly impervious to measurement choices. Regardless of the precise wording… the most common public attitude toward government is clearly discontent.
>
> John R. Hibbing and Elisabeth Theiss-Morse (2001)

In this chapter I review existing survey approaches to measure political trust attitude. I review the trust-in-government scales used by the ANES, NORC GSS, Gallup and other major survey research organizations and show how these scales tap into different dimensions of political trust construct

Operationalizations of Political Trust

Political trust is a confusing matter. There exists, as yet, no general agreement about the best way to measure political trust (Citrin and Muste 1999; Gershtenson, Joseph and Plane 2007). Citrin and Muste (1999) have reviewed no less than twenty-five measures of political trust with very diverse focus, ranging from short- and long-term regime support, to attitudes toward specific political institutions or actors such as the incumbent congress and president, to more stable orientations like political cynicism. I will focus on the measures most commonly used in political science research, particularly the ANES Trust in Government scale (also known as Michigan scale) and its modifications, the NORC GSS and Harris, and Gallup's scale.

The ANES Political Trust Scale

ANES Political Trust scale (also referred to as the Trust in Government scale) developed at the University of Michigan Survey Research Center and Center for Political Studies, has achieved the widest currency in public opinion and political attitude research (Citrin and Muste 1999; Levi and Stoker 2000). First included in the ANES in 1958, it has evolved into the longest available time-series cross-sectional (TSCS) measure of trust.[28]

Surprisingly perhaps, the scale was not originally designed as an instrument to measure political trust (Stokes 1962). Instead, the purpose was to categorize respondents according to their "basic evaluative orientations towards the national government" (Stokes 1962, 64). Over the years, researchers have thus tried to disentangle the meaning of responses to this somewhat *ad hoc* set of items. Because the questions have focused on the overall effectiveness of government policies, some scholars have argued that they measure mostly public support for the political system. Among these proposed conceptualizations were political allegiance, commitment and legitimacy, and their counterparts—political cynicism, disaffection and alienation (Citrin and Muste 1999; Gershtenson, Joseph and Plane 2007). By the mid-1970s, the literature converged on the idea that the scale was measuring something distinct from profound political discontent. Miller (1974) was arguably the first to suggest that the scale actually tapped into the latent construct of trust. Citrin (1974) refined the meaning of the scale further, arguing that the ANES questions were essentially

[28] Trust in government was not measured in the ANES in 1960 and 1962 and in the 1958 respondents were not asked a question about whether the government is run by a few big interests. Therefore, 1964 is usually taken as the earliest data-point for the time-series, although 1958 data is often used to benchmark the level of trust in that period.

measuring public support for the incumbent administration in Washington rather than broad orientations to the political system as a whole.

The introduction to the set of question directs respondents away from "Democrats or Republicans in particular" and toward the "Government in general" (Alford 2001). The items also ask about the "Government in Washington" and "officials" rather than "politicians" and "politics" (Citrin and Muste 1999). The two first items refer to the "Government in Washington" asking respondents how often it can be trusted "to do what is right" and whether it is run "by a few big interests." Three other questions shift the focus to the "people in government" or "people running government" and ask how "wasteful", "crooked" or "smart" they are (Citrin and Muste 1999, 470).

> *People have (1958, 1964: I'd like to talk about some of the) different ideas about the government in Washington. These ideas don't refer to democrats or republicans in particular, but just to government in general. We want to see how you feel about these ideas:*
>
> 1. *TRUST: 'How much of the time do you think you can trust the government in Washington to do what is right—<u>just about always</u>, <u>most of the time</u> or only some of the time?' ('none of the time' volunteered)*
> 2. *INTERESTS: 'Would you say the government is pretty much run by a few big interests looking out for themselves or that it is run for the <u>benefit of all the people</u>?'*
> 3. *WASTE: 'Do you think that people in the government waste a lot of money we pay in taxes, <u>waste some of it</u>, or <u>don't waste very much of it</u>?'*
> 4. *CROOKED: 'Do you think that quite a few of the people running the government are (1958-1972: a little) crooked, <u>not very many are</u>, or do you think <u>hardly any of them are</u> crooked (1958-1972: at all)?'*
> 5. *SMART: 'Do you feel that almost all of the people running the government are smart people who <u>usually know what they are doing</u>, or do you think that quite a few of them don't seem to know what they are doing?'*
>
> Notes: the questions are preceded by the concept tapped by each indicator. Trusting responses are underlined[29]

[29] Hereinafter, the most recent wording of the questions is provided. Wherever possible/necessary, the changes in the wording are also indicated.

Early inquiries (Citrin 1974; Miller 1974) typically involved constructing an overall, additive index of trust consisting of responses to these five questions. However, ANES dropped the *Smart* item following the 1980 survey due to its low reliability (see Parker 1986). Hence, the time-series index of trust now relies on the four remaining items (Citrin and Muste 1999).

Combining these questions into a single index, however, conflates several, potentially distinct dimensions of the political trust construct. The first and perhaps broadest question (*Do What Is Right*) deals with the assessment of the overall trustworthiness of the government as well as with implicit normative expectations about the way the government functions (Stokes 1962). Not surprisingly, then, responses to this question have also been used by a number of survey research organizations in the US and abroad as a single-item indicator of trust in government The following two items measure respondents' beliefs about whether the government is run primarily for special interests or for the people as a whole and whether it is done efficiently from the taxpayer's perspective (Citrin and Muste 1999; Ulbig 2002). These two concerns are tapped by the *Interests* and *Waste* questions, respectively. The latter item has been roundly criticized, however, for being a poor operationalization of perceived government inefficiency (Durr, Gilmour, and Wolbrecht 1997; Hibbing and Theiss-Morse 1995), though it does appear to tap the notion that government is wasteful or inefficient for some reason (Ulbig 2002). Finally, the last two questions measure respondents' personal concerns about the integrity (*Crooked*) and competency (*Smart*) of government officials (Ulbig 2002).

But combining questions with such seemingly distinct perspectives of the "government in Washington" into a single scale has generated substantial criticism.

Some researchers have argued that treating its components separately might provide more valuable insight into the nature of political trust (Freeze and Montgomery 2009; Ulbig 2002). Various investigators have proposed using just three (Bennett, 2001) or two (Citrin and Green, 1986) item scales. Whereas others have relied on only the first item that specifically mentions trust in the wording of the question (Alford 2001; Citrin and Luks 2001; Hibbing and Smith 2004). Typically, however, selection of what items to trend and analyze has been arbitrary with minimal logical and methodological justification (Freeze and Montgomery 2009).

Although the ANES Political Trust scale has often been criticized for the vagueness of its conceptual meaning (cf. Gershtenson and Plane 2007), scholars have unfortunately failed to develop alternative measures of political trust or introduce new and better items to capture their rival notions of the underlying construct (Levi and Stoker 2000). Despite this ongoing critique, the ANES measure of trust remains one of the most widely used indicators in political attitude research.

Modifications of the ANES Political Trust Scale

The ANES operationalization of trust in government attitude has become adopted by a variety of national survey research organizations, such as Gallup, CBS/New York Times, ABC/Washington Post, Pew Research Center, CNN/Opinion Research Corporation, The Harris Poll and others. Due to some practical reasons, like the frequency of survey administration, concerns of the questionnaire length, and efforts to minimize respondent refusal and cost, trust in government is typically measured by asking a single question. In most cases, this is either a verbatim or a modified ANES' *Do What's Right* item. Below, I present the wording of the questions on trust in government used

by the major survey research organizations, with the ANES benchmark question quoted for comparison.

ANES: (1958)	*"How much of the time do you think you can trust the government in Washington to do what is right—just about always, most of the time or only some of the time?" ("none of the time" volunteered)*
Gallup: (1976)	*"How much trust and confidence do you have in our federal government in Washington to do what is right—a great deal, a fair amount, not very much, or none at all?"*
CNN: (2008)	*"How much of the time do you think you can trust the government in Washington to do what is right: just about always, most of the time, or only some of the time?"*
CBS / New York Times: (1976)	*"How much of the time do you think you can trust the government in Washington to do what is right: just about always, most of the time, or only some of the time?"*
ABC / Washington Post: (1985)	"*How much of the time do you trust the government in Washington to do what is right? Would you say just about always, most of the time, or only some of the time?"*
Pew Research: (1997)	*"How much of the time do you think you can trust the government in Washington to do what is right—just about always, most of the time, only some of the time, or never?"*
Newsweek Poll: (n/d)	*"Generally speaking, how often do you think you can trust the government to do what's right? Can you trust the government most of the time, only some of the time, hardly ever, or never?"*

Notes: the year indicates the time a given format of question appeared in the Pew Research database (my estimate)

From a measurement standpoint using one question to tap into such a complex attitude, as political trust is problematic. There is no straightforward way to assess the reliability and validity of a single-item survey measure once the survey has been conducted (cf. Bergkvist and Rossiter 2007; but also see Poznyak 2011). However, Ulbig (2002) argues that the individual *Do What's Right* item can be used not only to measure

the construct but also to advance our understanding of political trust. She shows that by using this single question as a basic measure of political trust and the remaining three ANES trust items as its predictors, it is possible to unravel the sources of political trust.

GSS and Harris Institutional Trust Scale

The approach developed by the National Opinion Research Center (NORC) at the University of Chicago and Louis Harris and Associates provides an alternative measure of trust in government (Citrin and Muste 1999; Moy and Pfau 2000).[30] Instead of asking about people's overall confidence in "Federal Government in Washington," they utilize the wording designed to assess people's trust in a variety of institutions, including the three main branches of the American national government. This question is worded as follows:

> *"I am going to name some institutions in this country. As far as the people running these institutions are concerned, would you say you have a great deal of confidence, only some confidence, or hardly any confidence at all in them?"*
>
> 1. *Executive branch of the federal government*
> 2. *U.S. Supreme Court*
> 3. *Congress*

Harris first pilot-tested this question in 1966 and 1967 and began regularly asking it since 1971. NORC adopted the question in 1972 (Moy and Pfau 2000). This wording of the question similarly received its share of criticism. While the ANES Trust in Government index is typically referred to as vague, NORC GSS and Harris measure is instead criticized for narrowing down the concept too much down (Hibbing and Theiss-Morse 1995).

[30] The same design of the question and similar wording is used by the World Values' Survey and the European Values Survey

Gallup and Opinion Research Center Political Trust Scale

Gallup and Opinion Research Center (ORC) ask a seemingly similar version of the question, which nevertheless convey a much different meaning. While Harris and NORC GSS questions are people-oriented—that is elicit public attitudes towards the elected officials, Gallup and ORC questions are system-oriented (Moy and Pfau 2000). Additionally, Gallup and ORC offer a wider range of response options to the respondents. Gallup offers two positive choices, comparing to Harris and NORC GSS, who provide only one. ORC goes even further to provide the seven-point scale ranging from "no trust and confidence at all" to "complete trust and confidence." The wording of this question is the following:

> *As you know, our federal government is made up of three branches: an executive branch, headed by the president: a judicial branch, headed by the U.S. Supreme Court: and a legislative branch, made up of the U.S. Senate and House of Representatives. First, let me ask you how much trust and confidence you have at this time in the executive branch headed by the president, the judicial branch headed by the U.S. Supreme Court, and the legislative branch, consisting of the U.S. Senate and House of Representatives—a great deal, a fair amount (quite a lot), not very much (some), or none at all (very little)?*
>
> 1. *The executive branch headed by the president*
> 2. *The judicial branch, headed by the U.S. Supreme Court*
> 3. *The legislative branch, consisting of the U.S. Senate and House of Representatives*

Note: the former versions of response options are given in brackets. Similar to the NORC GSS and Harris' questions, the list of institutions here is not limited to the three branches of national government; they are not quoted, as they do not tap the trust in government construct.

Chapter summary

This chapter reviewed several alternative approaches to survey measurement of political trust construct. While none of the reviewed measures is impeccable, the students of political trust are privileged to be able to choose from more than one measure of trust—a very rare luxury in public opinion research. Because I am

interested in the cross-time dynamic of trust, my choice is however limited to the available time-series measures: the ANES four-item Trust-in-Government scale and the GSS three-item Confidence-in-Institutions scale.

I will limit my attention to the ANES measure of trust. The ANES scale originating in 1958 has evolved into the longest available time-series cross-sectional measure of trust in government. This provides an unparalleled opportunity to model the micro- and macro-level dynamics of trust during the last fifty years. Besides, the ANES operationalization of trust in government—closest to Easton's (1965) conceptualization of political support—has become a test field for most political trust research. Until now, most theories of trust have been suggested in respect to and tested on the ANES measure of trust.

Before the ANES measure of trust could be employed as a dependent variable in the cross-sectional time-series, I need to test whether the meaning-and-interpretation of the ANES items is comparable across groups of respondents across samples over time. In the next section, I will test the longitudinal measurement invariance of the ANES trust construct.

CHAPTER 7

PSYCHOMETRIC ASSESSMENT OF THE ANES TRUST-IN-GOVERNMENT SCALE

> For over 30 years, analysts have been misled in their evaluation of public trust by a single question whose "absolute" measure of that concept appears woefully inadequate for understanding American politics.
>
> David Moore (Moore 2002). "Just One Question" - The myth and mythology of trust in government

For fifty years (1958-2008), the ANES program has been assessing citizens' evaluations of the "government in Washington." A critical assumption in using such data for longitudinal research is that the meaning and interpretation of such items is comparable across groups of respondents at any one point in time and across samples over time. In this section, I introduce the idea of measurement equivalence testing and test it empirically using the multigroup confirmatory factor analysis approach for ordered-categorical data. Next, I discuss the meaning and interpretation of the items constructing the scale in the longitudinal perspective.

Implications

Over time, many measurement issues of the ANES political trust scale have been addressed in the literature (see e.g. Abramson and Finifter 1981; Citrin and Muste 1999; Craig, Niemi, and Silver, 1990; Glenn 1990; Freeze and Montgomery 2009; Hill 1981; Miller 1974; Niemi, Craig, and Mattei 1991; Parker 1986). The meaning of the scale has been refined and most problematic item has been dropped (see Citrin and Muste 1999; Freeze and Montgomery 2009; Parker 1986). However, in spite of the growing literature at least one major problem remains unresolved to date—the over time comparability of the ANES political trust scale. ANES has been measuring political trust over the last fifty years and the collected measures are an attractive data source

for longitudinal analysis. However, the mere availability of data does not necessarily imply that meaningful comparisons over time are possible. Before complex attitudinal constructs—such as political trust—can be compared in a valid way over various time points, the scale needs to possess the characteristic of measurement equivalence/invariance[31](Khoo et al. 2006).

The concept of measurement equivalence refers to the question "whether or not, under different conditions of observing and studying phenomena, measurement operations yield measures of the same attributes" (Spini 2003; Steenkamp and Baumgartner 1998; Vandenberg and Lance 2000). In cross-sectional cross-national studies, the importance of measurement equivalence is widely recognized by now (Khoo et al. 2006). However, measurement equivalence is an equally crucial prerequisite for longitudinal research. Bishop (2005), for example, argues that, to make valid over-time comparisons, a question should not only bear the same meaning to respondents at any one point of time—the same stimulus principle. Its meaning should be consistent over time as well—the constant stimulus principle.

At a general level, measurement equivalence addresses whether respondents from different samples or groups respond to the survey items in the same or similar way. Equivalence should not be taken for granted, but is a hypothesis that needs to be tested empirically. Multi-group confirmatory factor analysis (MGCFA; Jöreskog 1971) is arguably the most popular statistical tool used to test measurement equivalence (Steenkamp and Baumgartner 1998; Billiet 2003; Vandenberg and Lance 2000), although alternatives exist.[32] I start by describing the well-known MGCFA model for

[31] In the literature, the terms *equivalence* and *invariance* are used interchangeably.

[32] Examples of alternative approaches are the Item Response Theory (IRT) or Latent Class Analysis.

continuous indicators. Subsequently, an extension for ordered-categorical data is presented.

Method

In the MGCFA approach, measurement models are compared across groups, which in my case are time-points. Measurement is considered equivalent when the relations between the observed indicators and the latent traits are invariant between the groups (Reise, Widaman, and Pugh 1993).

Formally, the general MGCFA model can be written as follows:

$$x_{ij}^{g} = \tau_{i}^{g} + \lambda_{i}^{g}\xi_{ij}^{g} + \varepsilon_{ij}^{g} \qquad (1)$$

In formula (1), x_{ij}^{g} refers to the observed score on item *i* for person *j* in group *g*. Observed scores are modeled as a function of three components: item intercept τ_{i}^{g} ; the product of factor loading λ_{i}^{g} and latent variable score ξ_{ij}^{g} ; error term ε_{ij}^{g} .

In the literature, various levels of measurement equivalence are distinguished; each with their own operationalization and implications for comparability of scores (Steenkamp and Baumgartner 1998).

Configural equivalence is considered the basic level of equivalence. It holds if the measurement model for the latent construct has the same configuration of salient and non-salient loadings across all groups (time points). Configural equivalence means that the same factor structure is retrieved in all groups, but does not require that measurement parameters are equal over groups (fig. 7.1). This level of equivalence is relatively easy to reach, but does not guarantee any score comparability yet.

Metric equivalence is a higher level of equivalence, and implies that the factor loadings (the λ_{i}^{g} 's) are invariant over time points. If metric equivalence is observed, a

one-unit increase on the measurement scale has the same meaning across all samples taken at different points of time (fig. 7.1). This is a necessary condition for comparing effect parameters and covariances over groups.

If, besides factor loadings, also the item intercepts (the τ_i^g 's) are equal over time points, the level of *scalar equivalence* is reached. Scalar equivalence implies that two respondents with the same score on the latent variable at different points of time have identical expected scores on the observed variables (fig. 7.1). Once scalar equivalence has been established, latent mean comparisons over groups become possible.

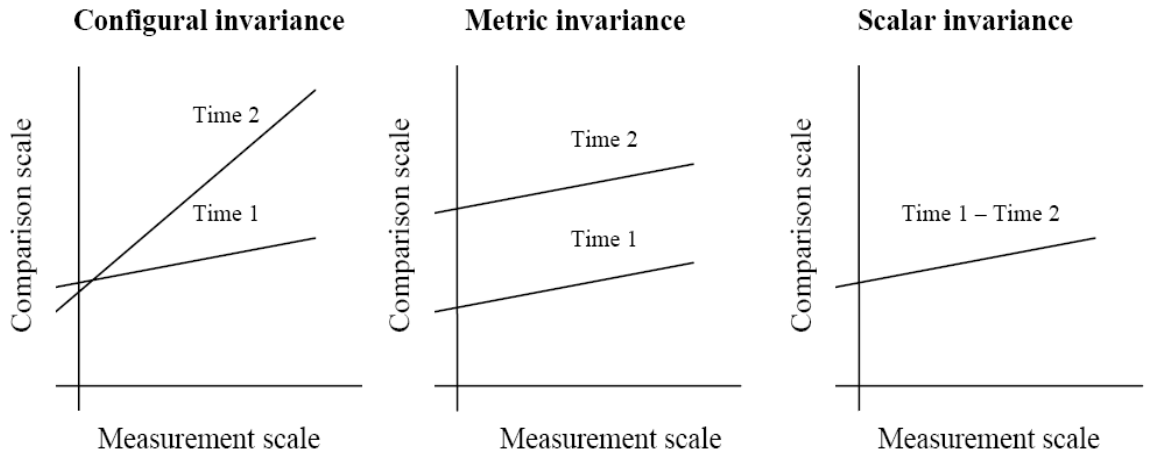

Figure 7.1. Types of Measurement Invariance

Notes: adapted from Meuleman (2009)

In practice, higher levels such as scalar equivalence are particularly often violated. Several ways of dealing with inequivalence have been suggested. Byrne and colleagues argue that meaningful comparisons do not require that measurement parameters for all indicators are equal across groups (Byrne, Shavelson, and Muthén 1989). Valid comparisons are also possible under the condition of partial rather than

full equivalence, i.e. when at least two items per construct operate invariantly (see Steenkamp and Baumgartner 1998 for a similar argument). If even this partial equivalence does not hold, research might choose to drop certain items or groups from the analysis, or even preclude any substantive comparison (Byrne, Shavelson, and Muthén 1989).

The MGCFA model described above rests on certain assumptions. One of these assumptions is that the indicators follow a multivariate normal distribution. Survey items, however, are often measured using ordered-categorical scales (i.e. scales with values that are both discrete and ordinal; (Byrne, Shavelson, and Bengt O. Muthén 1989), primarily for the ease of use by respondents. Non-continuous indicators clearly violate the assumption of multivariate normality. Nevertheless, researchers often neglect the ordered-categorical nature of their indicators, and analyze them as if they were continuous. The justification for this practice is sought in a series of simulation studies, showing that single-group CFA is relatively robust against deviations from the assumption of continuous data, under certain assumptions. Specifically, that the observed items have at least five answer categories, response distributions are not heavily skewed, and sample sizes are sufficiently large (Brown 2006).

In this specific analysis, however, discarding the ordered-categorical nature of the data is not an option. The ANES trust items contain 2 or 3 answer categories only, and show a high degree of skewness. Furthermore, a simulation study by Lubke and Muthén (2004) shows that the studies cited above sketch an overly optimistic image and that treating categorical data as continuous leads to inaccurate estimation. For these reasons, MGCFA for ordered-categorical data is warranted in this analysis of the ANES political trust scale.

MGCFA for ordered-categorical data departs from the assumption that observed scores of the categorical items x_{ij}^{g} are determined by unobserved response variables x_{ij}^{g*}. Unlike the observed indicators, these latent response variables are continuous in scale and normally distributed (Brown 2006; Cheung and Rensvold 2002; Millsap and Yun-Tein 2004; Muthén and Asparouhov 2002; Temme 2006). Specifically, an observed variable x_{ij}^{g}, with c categories, is obtained by partitioning the x_{ij}^{g*}'s along certain thresholds:

$$x_{ij}^{g} = m \quad if \quad \upsilon_{jm}^{g} \prec x_{ij}^{g*} \prec \upsilon_{j(m+1)}^{g} \tag{2}$$

where $m = 0, 1, \ldots, c$ and $\left\{\upsilon_{j0}^{g}, \upsilon_{j1}^{g}, \ldots, \upsilon_{j(c+1)}^{g}\right\}$ are threshold parameters for the j^{th} item in group g (Millsap and Yun-Tein, 2004: 481). As a result, observed variables x_{ij}^{g} are no longer directly used in the MGCFA model. Instead, they are indirectly connected to the measurement model by means of the underlying response variables x_{ij}^{g*}:

$$x_{ij}^{g*} = \tau_{i}^{g} + \lambda_{i}^{g}\xi_{ij}^{g} + \varepsilon_{ij}^{g} \tag{3}$$

Thus, besides the factor loadings λ_{i}^{g} and intercepts τ_{i}^{g}, the MGCFA model for ordered-categorical data contains a new set of parameters, namely the thresholds. These thresholds capture transitions from one category to another, and thus reflect the frequency distributions of categorical items (Davidov et al. 2010).

The introduction of a new set of parameters has important repercussions for model estimation as well as for equivalence testing. First, the estimation of threshold parameters brings along additional difficulties for model identification, as it is impossible to obtain a unique set of estimates for intercepts and thresholds simultaneously. Additional constraints need to be imposed (for a more detailed discussion, see Millsap and Yun-Tein 2004; Temme 2006).[33] To assess measurement

[33] Various software packages take different approaches to this issue of model identification. In M*plus*—the software package used in this analysis—the default procedure is to fix all item intercepts equal to

equivalence, the equality of threshold parameters rather than intercepts is tested. The equality of thresholds implies that respondents with the same score on the latent variable at different points of time have the same expected distribution over the categories of the indicators. Moving from intercepts to thresholds thus causes a shift from interpretation in terms of means to an interpretation in terms of proportions.

Second, the distinction between metric and scalar equivalence that is well established in MGCFA for continuous data becomes meaningless in ordinal MGCFA. Davidov et al. (2011: 160) remark that in "the ordinal CFA […], the item probability curves (i.e. the scores of the ordinal indicators) are jointly influenced by the factor loadings (λ's), the intercepts (τ's) and the thresholds (υ's)." When item intercepts vary across groups, the equality factor loadings does not have a substantive meaning, as this condition does not guarantee that item response curves have the same slope.

Data and variables

The data source for the analysis is the ANES time-series cross-sectional dataset (1964-2008).[34] I take the standard four-item ANES trust in government scale (Citrin and Muste 1999). Appendix C provides descriptive statistics of the items.

I have included all years in the sample, for which the four-item scale of political trust is available. The resulting data set contains nineteen time-points; number of respondents in parenthesis: 1964 (1,267), 1968 (1,154), 1970 (1,289), 1972 (1,973), 1974 (1,346), 1976 (1,853), 1978 (1,892), 1980 (1,411), 1984 (1,724), 1988 (1,600),

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zero (among other constraints that are imposed—see Millsap and Yun-Tein 2004; Muthén and Asparouhov 2002 for more details).

[34] Further details can be found at the website of the American National Election Study: www.electionstudies.org

1990 (1,817), 1990 (2,079), 1994 (1,659), 1996 (1,455), 1998 (1,193), 2000 (1,453), 2002 (1,261), 2004 (1,011) and 2008 (1,009). The cumulative sample size is 28,446.

Model

Figure 7.2 provides schematic representation of the tested single-factor model with categorical indicators. The main difference in this specification compared to the CFA model with continuous indicators is that the ordinal observed items x are not influenced by the underlying latent factor ξ directly. Instead, the influence is indirect through a continuous latent response variable x^*. The model also includes the item-specific threshold parameters v, which partition the continuous latent variable x^* into respective categories (see Davidov et al., 2010). The number of thresholds in an item depends on the number of response categories. Since the thresholds capture transition from one response category to another, in a variable with c response categories, the number of thresholds equals $c-1$, (Davidov et al., 2010). Pertaining to our case, *Do What is Right, Crooked* and *Waste* items each have two thresholds, and a binary *Interest* item has one threshold. Another notable distinction of the categorical CFA model is that the factor loadings λ and intercepts τ are the parameters of the latent response variable x^*, whereas in the continuous CFA model they are the parameters of the observed indicators x.

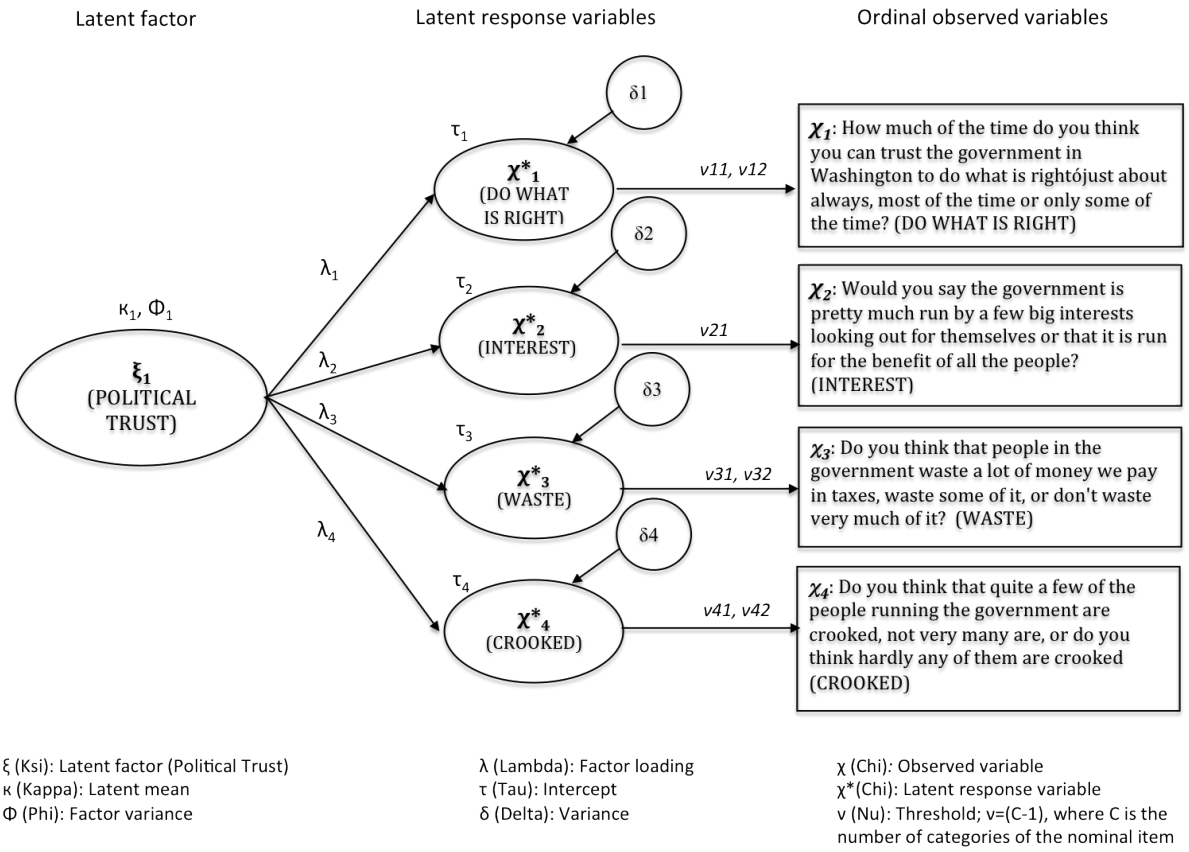

Figure 7.2. Four-item—one-factor measurement model of political trust construct

I tested the measurement equivalence of the political trust construct by fitting a set of consecutive MGCFA models for ordered-categorical data. As a preparatory step for the multi-group analysis, I started by fitting single-group models for 19 time points separately (see Byrne 2001) and then estimated the same model for the cumulative 1964-2008 sample. A summary of this analysis can be found in Table 7.1.

In order to test for the longitudinal measurement invariance of political trust construct, I then estimated independent models for all subsamples simultaneously via the MGCFA approach. Fitting all models independently but in the same run, allowed testing whether the models have the same configuration over time, impose necessary equality constrains in subsamples, obtain the global fit indices for the overall model as

well as local fit indices for each subsample. In order to establish whether the common structure of the latent construct could be confirmed across all groups, and whether a common metric for it could be established, a latent variable of trust was considered for each time-point in the dataset. Four observed categorical items served as the indirect indicators of the latent trust variable at each time point, functioning via respective continuous latent variables.

Measurement equivalence of the construct was approached as follows. Because configural equivalence is a prerequisite for the higher levels of equivalence, it was examined first. I tested for configural equivalence by validating how well the measurement of the construct at time-1, fits the data at time-2 and so on, when the thresholds and factor loadings are freely estimated. Next, I tested a full equivalence model in which the factor loadings and thresholds were constrained to be equal over time-points. The fit of the model was evaluated based on the global and local fit indices. At the final stage, I set free certain thresholds in the full equivalence model to obtain a better model fit and ensure no sizeable cross-group differences. The difference between the models was assessed by evaluating the change in the model fit indices.

All models were estimated in M*plus* 6.1. Robust weighted least square (WLSMV) estimator with Theta parameterization were chosen to fit the models with categorical outcomes.

Results

I begin by estimating separate CFA model for each subsample, which is an important prerequisite of the MGCFA analysis (Byrne 2010). Table 7.1 summarizes fit statistics of the model in each individual subsample and in the pooled 1964-2008 dataset. Overall,

the global fit of the 19 models is satisfactory. Comparative Fit Index (CFI) and Tucker Lewis Index (TLI) exceed the threshold of .95 in all samples. In all but two years, Root Mean Square Error of Approximation (RMSEA) is below .08. All standardized factor loadings are larger than 0.50, indicating that the four items are sufficiently valid and reliable indicators of the latent construct political trust. These results are an acceptable point of departure for the multi-group analysis.

Table 7.1. Results of the single-group CFA

Year	Response %	Standardized factor loadings (λ)				N	χ2	df	*p*-value	CFI	TLI	RMSEA
		Interest	Waste	Crooked	Do What's Right							
1964	80.6	0.832 (0.024)	0.674 (0.028)	0.701 (0.025)	0.688 (0.024)	1267	23.76	2	0.000	0.988	0.964	0.087
1968	77.4	0.847 (0.030)	0.638 (0.032)	0.595 (0.031)	0.672 (0.029)	1154	14.22	2	0.000	0.990	0.969	0.068
1970	77.6	0.823 (0.026)	0.584 (0.031)	0.639 (0.027)	0.737 (0.027)	1289	0.67	2	0.714	1.000	1.000	0.000
1972	75.0	0.843 (0.021)	0.607 (0.024)	0.659 (0.020)	0.788 (0.019)	1973	1.86	2	0.395	1.000	1.000	0.000
1974	70.0	0.873 (0.026)	0.639 (0.031)	0.683 (0.025)	0.760 (0.025)	1346	3.96	2	0.138	0.999	0.997	0.025
1976	70.4	0.807 (0.026)	0.593 (0.029)	0.615 (0.025)	0.763 (0.024)	1853	11.14	2	0.004	0.995	0.984	0.045
1978	68.9	0.847 (0.025)	0.660 (0.027)	0.598 (0.024)	0.755 (0.024)	1892	0.74	2	0.690	1.000	1.000	0.000
1980	71.8	0.786 (0.035)	0.614 (0.036)	0.628 (0.030)	0.682 (0.034)	1411	7.14	2	0.028	0.994	0.983	0.040
1984	72.1	0.819 (0.026)	0.561 (0.029)	0.569 (0.027)	0.678 (0.027)	1724	3.44	2	0.179	0.999	0.997	0.019
1988	70.5	0.805 (0.030)	0.602 (0.031)	0.653 (0.027)	0.610 (0.029)	1600	18.06	2	0.000	0.987	0.960	0.067
1990	70.6	0.852 (0.026)	0.653 (0.027)	0.668 (0.025)	0.602 (0.029)	1817	0.04	2	0.983	1.000	1.000	0.000
1992	74.0	0.798 (0.029)	0.675 (0.028)	0.610 (0.027)	0.584 (0.028)	2079	10.78	2	0.006	0.994	0.982	0.043
1994	72.1	0.773 (0.031)	0.663 (0.031)	0.664 (0.679)	0.679 (0.031)	1659	4.58	2	0.101	0.998	0.993	0.027
1996	59.8	0.777 (0.032)	0.632 (0.032)	0.656 (0.030)	0.652 (0.032)	1455	7.69	2	0.021	0.995	0.984	0.043
1998	63.8	0.708 (0.033)	0.684 (0.030)	0.672 (0.030)	0.712 (0.030)	1193	15.95	2	0.000	0.988	0.963	0.074
2000	60.5	0.769 (0.032)	0.569 (0.033)	0.671 (0.029)	0.623 (0.030)	1453	10.29	2	0.006	0.992	0.976	0.052
2002	66.5	0.794 (0.029)	0.565 (0.033)	0.671 (0.029)	0.679 (0.029)	1261	6.66	2	0.036	0.996	0.988	0.042
2004	66.1	0.845 (0.041)	0.523 (0.041)	0.542 (0.037)	0.629 (0.037)	1011	22.82	2	0.000	0.968	0.903	0.099
2008	59.5	0.736 (0.030)	0.709 (0.029)	0.618 (0.027)	0.691 (0.038)	1009	18.92	2	0.000	0.986	0.958	0.064
1964-2008	70.5	0.835 (0.006)	0.623 (0.007)	0.641 (0.006)	0.718 (0.006)	28446	116.9	2	0.000	0.996	0.989	0.042

Source: The data are ANES cumulative time-series dataset (1964–2008).

Notes: Standard errors are in parentheses. All standardized factor loadings are significant at α=0.001. No confidence intervals for RMSEA are available for the models with categorical outcomes. Response rates for the 1964-1992 come from Luevano (1994). Response rate for the 1994-2000 come from the ANES Data Quality report (http://www.electionstudies.org/overview/dataqual.htm). For 2002, 2004 and 2008 datasets, response rates come from respective study-pages. Further details can be found at the ANES website at www.electionstudies.org. The median response rate is calculated for the cumulative 1964-2008 dataset.

As a first step in testing the measurement equivalence of the ANES trust scale, I estimated a multi-group model that is configurally equivalent (Model 1 in Table 7.2). In this model, the four political trust indicators load on the latent construct in all 19 groups. No equality constraints are imposed on factor loadings or thresholds.

The model fits the data very well (RMSEA = 0.050; CFI = 0.994; TLI = 0.983), indicating that configural equivalence holds for the ANES political trust scale. However, configural equivalence does not yet guarantee that trust scores can be compared over time. Configural equivalence model merely serves as a baseline, against which the more constrained models will further be compared.

In a next step, I estimated a multi-group model in which factor loadings as well as thresholds are constrained to be equal over time points (Model 2 in Table 7.2). The global fit of this constrained model (RMSEA=0.078; CFI=0.953; TLI=0.958) is still acceptable according to common guidelines.[35] However, in order to evaluate measurement equivalence, model comparison is more informative than looking at global fit indices. Compared to the configurally equivalent model, Model 2 has a substantially worse fit, according to the guidelines put forward by Cheung and Rensvold (2002) (ΔCFI = -0.039, ΔTLI = -0.032, and ΔRMSEA = .040). This is a clear indication that at least some of the imposed equality constraints are untenable.

By looking at the modification indices (MIs) and expected parameter changes (EPCs), I tried to locate the misfit in Model 7.2. In this way, problematic equality constraints can be identified, and subsequently set free in a partially equivalent model.

[35] Because of the large sample size, interpretation of the models' fit based on the p-value coefficients can be misleading. As the sample size increases, so does the statistical power and the chances for rejecting a model also go up. Therefore, I will abstain from making conclusions based on the $\chi 2$- and p-value statistics, although I will report it in the text. For the same reason, I do not compute the $\chi 2$ difference test, relying instead on the assessment of change in the model fit indices (see Cheung and Rensvold 2002).

The deviations from full equivalence are clearly patterned. The over-time equivalence of the *Waste* item turns out to be the most problematic, as the majority of the high MIs and EPCs refer to this indicator. More specifically, I found substantial deviations for the first threshold of the *Waste* item in the 1968, 1970, 1972, 1976, 1978, 1980, 1984, 1990, 1992, 1994, 1996, 1998, 2000, 2002 samples; and for the second threshold in the 1976, 1978 and 1996 samples. This is a clear indication that the way in which respondents interpret the *Waste* item is not constant ad varies considerably over time. To a lesser extent, also the comparability of the *Crooked* item shows problems. Various deviations are detected for the first (in 1964, 1972, 1978, 1992, 1994) as well as the second (1964) threshold of the *Crooked* item.

Next, I estimated a new model (Model 3 in Table 7.2) in which these problematic threshold parameters were set free. Since the loadings and thresholds of the two items—namely the *Do What Is Right* and *Interest*—remained fixed, this model still satisfies the condition of partial equivalence. The global fit of this partial equivalence model is satisfactory (CFI = 0.986; TLI = 0.985 and RMSEA = 0.047). More importantly, CFI and RMSEA for this model are not substantially larger than the CFI and RMSEA for the configural model (ΔCFI = -0.008; ΔTLI = 0.002 ΔRMSEA = -0.003; see Cheung and Rensvold 2002). This is an indication that the partially equivalent model does not contain sizeable cross-group differences in factor loadings or thresholds anymore. Therefore, I accepted the partially equivalent model. This is an important conclusion, suggesting that the latent means in political trust (based on this model) are comparable over the whole ANES time series.

The chi-square contributions from each sample to the overall model are presented in Appendix F.

Table 7.2. Fit statistics of the equivalence models

Model	χ2	df	*p*-value	CFI	TLI	RMSEA
1. Configural equivalence	180.699	38	0.000	0.994	0.983	0.050
2. Full threshold equivalence	1300.716	128	0.000	0.953	0.958	0.078
3. Partial threshold equivalence	451.088	105	0.000	0.986	0.985	0.047

Notes: The data are ANES 1964 – 2008 pooled time-series dataset. The models are fitted independently for each year but in the same run. Fit statistics indicates the overall fit of each of the three tested models

Unstandardized and standardized factor loading coefficients for each time-point in configural, full equivalence and partial equivalence models are presented in Appendixes D and E.

The pattern in captured responses may be visualized by plotting the thresholds[36] as estimated by the partially equivalent model (Figure 7.2). The pattern is of a less interest for those items for which we kept thresholds fixed and who show no variation. More interesting are the *Waste* and *Crooked* item, for which the thresholds parameters do vary.

Especially the first threshold of the *Waste* item shows considerable cross-time variation. This threshold reflects the size of the first answer category for the *Waste* indicator, i.e. "*waste a lot of money we pay in taxes*". Interestingly enough, the threshold value seems to evolve more or less smoothly through time instead of showing random variation. The threshold value peaks in 1970. This means that a respondent in 1970 had a higher propensity of choosing this particular answer category than a respondent with the same level of trust in a different year. In other words, the high value for threshold 1 of the *Waste* item in 1970 expresses a more than usual strong concern for wasteful government spending, irrespective of the general trust level. After 1970, the first

[36] The thresholds' estimates are a part of a standard M*plus* output for categorical indicators. Thresholds' estimates can be made available upon request.

threshold for *Waste* remains relatively high for several years. During the 1990s, concern for wasting government money drops substantially before increasing again during the first decade of the millennium.

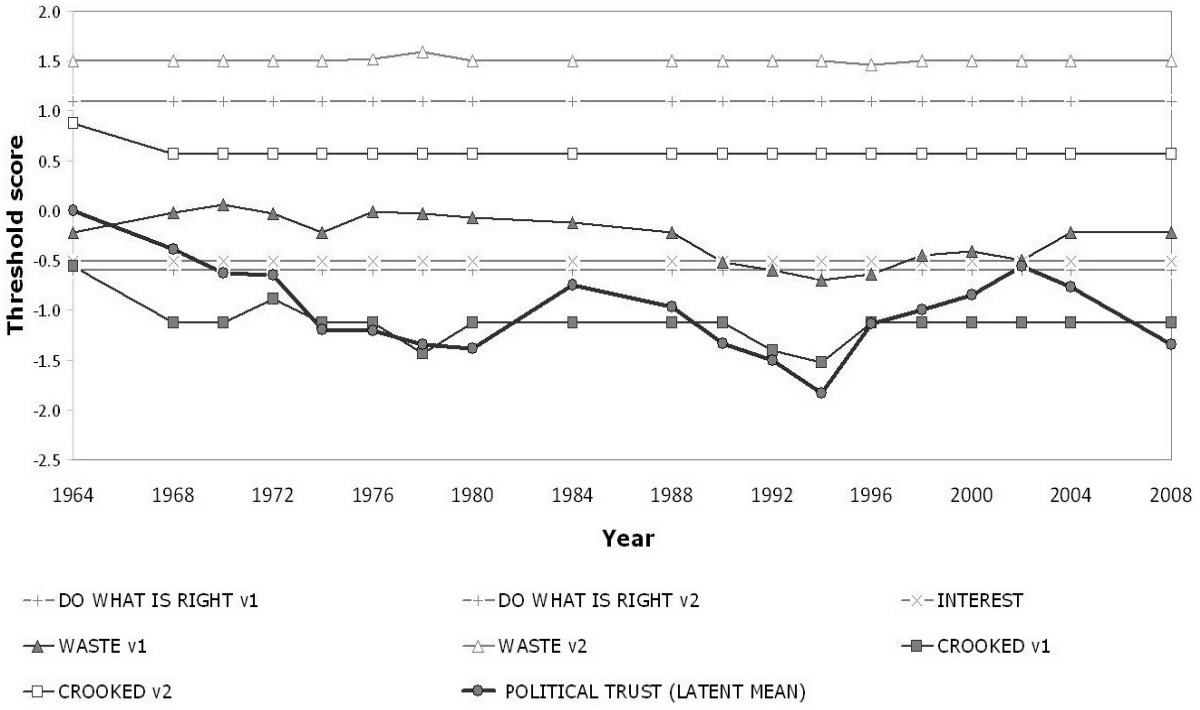

Fig. 7.2: The pattern of responses to the ANES political trust questions over time

Notes: the values on the plot are the thresholds (ν) of the items based on the partial equivalence model. The values of the political trust variable represent the latent mean scores.

Discussion

Tests for measurement equivalence are not only important for assessing the comparability of measures. Deviations from full equivalence can be a source of useful information providing insight in the nature of differences in responses to the survey questions over time (Poortinga 1989). The differences in responses to the *Waste* item have particularly important implications for my analysis.

Since the *Waste* item does not demonstrate longitudinal equivalence of thresholds, it means that the interpretation of this item varies over time.[37] Even though the wording of the *waste* item has remained identical, it has been functioning differentially, which makes the item less suitable for longitudinal research. My analysis is not the first to point at the inconsistent performance of the item (see Freeze and Montgomery 2010; Parker 1986). The problem with the item however, may not be in the low factor loadings or their variability, as suggested before. Instead, I see the problem in the psychometric properties of the *Waste* indicator. Recall, that since it does not have equal thresholds over time, people with the same score on the latent trust variable at different points of time, have different scores on the observed *Waste* item. This is not the case with the *Do What Is Right* and *Interest* items, and only partially concerns the *Crooked* item.

Some studies point in the direction of methodological artifacts to explain the problematic character of the *Waste* item. Blasius and Thiessen (2001), for example, argue that the wording "waste a lot of money" is ambigous causing respondents to choose as a compromise the neutral category. My findings do not support this explanation. I identified that the problem relates to the changing cross-time probabilities in choosing the first response category of the item (*waste a lot of money we pay in taxes*). In other words, controlling for the general level of political trust, the proportion of people considering that the government wastes a lot of money changes substantially over time. Figure 7.2 suggests that the pattern of responses to the *Waste* item is not random.

[37] Although same concerns refer to the *Crooked* indicator, it has substantially lesser extent of non-invariance between the samples.

However, the fact that factor loadings and thresholds of the *Waste* and to a lesser extent *Crooked* item vary over time should not be precluding from making longitudinal comparisons. For two items (*Do What Is Right* and *Interest*), measurement parameters are equal across group. This partial equivalence is sufficient to anchor the common meaning of the scale, and still allows over-time latent mean comparisons.

This insight into the functioning of Political Trust items challenges the approach ANES employs to compute the additive political trust index.[38] This additive index has been most commonly used in the literature, although it has numerous inherent problems. Most importantly, using sum-scales assumes that observed items are free of measurement error and have a stable meaning over time. In light of presented findings, these assumptions are highly questionable. Observed data are contaminated with measurement error, which needs to be accommodated in the model. Of equal importance is the fact that the *Waste* and partly the *Crooked* items exhibit differential functioning over time and thus confound the additive index. The additive approach does not take this into account, and thus undermines the validity of the trust index.

The latent factor score approach, based on the partial equivalence model, has several advantages compared to the additive approach. First and most generally, it accounts for the measurement error by distinguishing the error component from what is shared with a latent factor, and thus allows dealing with respondents' true scores on the trust scale. This in turn, reduces random error, and improves parameter estimates. Second, this approach maximizes the overall construct validity as the items with the

[38] In order to construct the additive index of trust, the responses are first transformed from 0 for distrusting responses, 50 for middle position (except for the dummy-coded *Interest* item), and 100 for trusting responses, summed and divided by the number of valid responses. In case the volunteered option "none of the time" of the *Do What Is Right* item is included in the analysis, the item is recoded as follows: None of the Time=0, Some of the Time=33, Most of the Time=67, Just About Always=100. Further details can be found at the ANES website at: www.electionstudies.org/nesguide/toptable/tab5a_5.htm

highest loadings on the trust factor have the largest effect on the factor score. As the weight of each item is also different for each wave of the survey, it therefore maximizes the validity of the trust index for any given wave of the survey—a critical requirement of the time-series research. Finally, it also accounts for the differential functioning of items in a scale.

Descriptive statistics of the constructed latent factor scores (on the aggregate level) are presented in Appendix G.

Having assessed the measurement equivalence of the political trust indicators, I turn in the next section to presenting models that test my hypotheses about the longitudinal dynamics of trust.

PART III

MODELS

CHAPTER 8

HOW PRIMING OCCURS? THE CAUSAL MECHANISM OF TRUST ATTITUDE PRIMING

> We have no authoritative figure [...] whom we all listen to and trust to sort out contradictory claims. Instead, the media is splintered into a thousand fragments, each with its own version of reality, each claiming the loyalty of a splintered nation. Depending on your viewing preferences, global climate change is or is not dangerously accelerating; the budget deficit is going down or going up.
>
> Barack Obama (2006) "The Audacity of Hope"

In this chapter, I proceed with more detailed analysis of causes in the cross-time variation of political trust. A particular focus of this chapter is on the cognitive mechanism responsible for the trust attitude priming. I test the hypothesis that national importance judgments mediate the effect of priming issue agendas on political trust (*H1-H3*). I employ the multilevel SEM approach with Bayesian MCMC estimation method to explain the longitudinal and cross-sectional variation of political trust simultaneously on the macro and micro-levels.

Method

Erbring, Goldenberg and Miller (1980, 20; italics added) argue that "the process of agenda-setting setting obviously takes place *over time*, not across regions, states, localities, or individuals, even if some cross-sectional variation may reflect systematic differences, not merely random fluctuation." Therefore, the effect of the change in the priming issue agendas on political trust may only be tested using longitudinal design. In the trust literature the macro-level time-series approach has become a conventional vehicle for such analysis (see e.g. Chanley 2002; Chanley, Rudolph and Rahn 2002; Hetherington and Rudolph 2008; Keele 2003; 2007).

I offer an alternative to the macro-level design. As the ANES has been measuring political trust for the last fifty years, collected data can be analyzed using multilevel SEM (MLSEM) modeling approach to pooled time-series cross-sectional (TSCS) data. By augmenting the ANES TSCS data with the macro-level data capturing the state of issue salience at each point of time in the analysis, MLSEM TSCS design allows to simultaneously assess the cross-sectional and cross-temporal variation in political trust. On the micro-level, the ML TSCS model will be explaining the cross-sectional variation in trust based on respondents' individual characteristics. On the macro-level, the model will be explaining how collective measure of trust moves in response to the shifts in the issue salience over time. Sine micro- and macro-level analyses will be combined in a single multilevel framework the macro-level conclusions could be further generalized on the micro-level.

To explore the causal mechanism responsible for trust attitude priming (*H1*), I employ the multilevel structural equation modeling (MLSEM) approach applied to the TSCS data (Byrne 2010; du Toit and du Toit 2008; Klein 2010; Mehta and Neale 2005; Muthén 1989; 1994; Muthén and Muthén 1998-2010; Rabe-Hesketh, Skrondal, and Pickles 2004; for the overview of multilevel SEM application in cross-sectional studies see Cheung and Au 2005).[39] MLSEM methodology combines the features of multilevel models (Goldstein 1986; Raudenbush and Bryk 2002) and structural equation models (Jöreskog 1971; 1973), and similarly consists of the measurement (or response) models and structural regression models for the latent variables (Rabe-Hesketh, Skrondal, and Pickles 2004).[40]

[39] Readers interested in the recent advances in the pooled time-series cross-sectional analysis may be interested in consulting the special *Political Analysis* issue on the topic (2007, vol. 15).

[40] Statistical techniques of multigroup SEM have been available since late 1980s, but their implementation in social and political research has been limited due to the relatively complicated

The multilevel SEM approach has several advantages over both macro-level time-series (TS) and cross-sectional multilevel designs. First, it does not limit researchers' ability to draw individual level inferences, since individual- and macro-level predictors are incorporated in one model. This also allows testing a wide range of hypotheses on both levels and drawing individual level inferences. Second, it allows testing complex mediation and moderation relationship between the priming issue agendas and trust. Finally, it incorporates the latent outcome variable into the analysis, which helps to mitigate the measurement error problems (Hancock 2006).

In line with hypothesis *H1*, in this analysis I will test the following proposed causal mechanism underlying political trust attitude priming:

> *National and media priming issue agendas ➔ public issue agendas (national importance judgments) ➔ judgments about the government trustworthiness*

Data and variables

Because of the multilevel design, the data came from several sources. Micro-level data are the ANES TSCS dataset (1964–2008). Macro-level data come from the Thomson Reuters/University of Michigan Surveys of Consumers (Index of Consumer Sentiment), New York Times annual index provided by the Policy agendas project (measures of the media issue priming), and the Bureau of Labor Statistics (real-world indicators of unemployment and inflation). Descriptive statistics of the variables employed in this analysis is presented in Appendix G.

Dependent variable. There is no universally accepted approach to operationalize trust in public opinion research (Chapter 6). Most commonly, trust is

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specification and estimation procedure and absence of adequate modeling software. For instance, the Bayesian estimation method particularly suitable for the analysis of multilevel data with a limited number of second-level units only became available as a part of the M*plus* routine in 2010.

modeled as a sum-index score. In chapter 7, I argued that this approach undermines the validity of the trust index. As far as studies usually operationalize the construct on the manifest (observed) level, they make an implicit assumption that the observed measure of trust results from the perfectly valid and reliable estimates. However, observed data are often contaminated with measurement error, which needs to be disentangled from the model (Rabe-Hesketh, Skrondal, and Pickles 2004). The solution would be changing the level of the analysis from observed to latent. This approach has several advantages. First, it accounts for the measurement error by distinguishing the error component from what is shared with a latent factor, and thus allows dealing with respondents' true scores on the trust scale. This in turn, reduces bias and sample variability, and improves the parameter estimates. Second, this approach maximizes the overall construct validity as the items with the highest loadings on the trust factor have the largest effect on the factor score. Finally, as the weight of each item is also different for each wave of the survey, it therefore maximizes the validity of the trust index for any given wave of the survey.

There are four waves in the 1964–2008 TSCS dataset when at least one indicator of trust construct is missing, i.e. 1958 (*Interest*), 1966 (*Waste* and *Crooked*), 1982 (*Crooked*), and 1986 (*Interest, Waste* and *Crooked*). Although ANES provides the index of trust for these years, it is not be equivalent to the constructed latent measure of trust. Therefore, I exclude these waves from the analysis. Although sacrificing meaningful data for any reason is always a regrettable decision, it is less critical in my case, as I am not dealing with an uninterrupted time-series model.[41]

[41] Keeping the large number of higher-level units in multilevel design is generally important. However, since I am using Bayesian estimation method in my analysis, even deleting four waves still gives me enough higher-level units for the analysis.

Independent variables. In order to capture the effect of the *micro-level* variables on trust, the following variables were considered for the model.

Following the strategy outlined by Hetherington and Rudolph (2008) I measure respondents' perceptions of the nationally important issues by using the *most important problem* (MIP) questions, or simply MIP. ANES measures respondents' MIP considerations by asking them the following question:

> "What do you think is the most important problem facing this country?" If more than one problem: Of those you've mentioned, what would you say is the single most important problem the country faces?[42]

I selected two issues, which, according to past research, have the strongest effect on trust. The first issue—MIP International—represents respondents' concerns about international issues or concerns (e.g. foreign policy, national defense, terrorism, or war) as nation's most important problem. The second issue—MIP Economy—captures respondents' concern about the issues like the state of economy, unemployment, inflation, and growing prices or interest rates. These variables are operationalized as binary, coded 1 if a respondent mentioned it as the most important problem during the interview and 0 if not.

I additionally captured people's opinions about the state of domestic economy by including the measure of the national economic evaluations.[43] My rationale for including this variable in addition to the MIP economy is as follows. First, it captures the opinions about the state of the U.S. economy among respondents scoring 0 on the MIP

[42] Hereinafter, the exact wording of the questions asked by the ANES has been changing over time. These changes however, were very minor and as such, unlikely to change the measurement outcome. Refer to the Study Codebook (Codebook of the American national election studies cumulative data files, 1948-2008) for all additional details.

[43] The measure of retrospective rather than prospective economic evaluations was chosen because the first is known to have stronger effect on the government approval. As Norpoth (Norpoth 1996) puts it: "To judge […] performance in office is not a question about things to come but about things done"

Economy scale—that is those, who did not consider domestic economy as the nation's most important problem during the survey. Even though many respondents may not consider the economy as the nation's top priority, they would nevertheless have an opinion about its current state. Besides, national economic evaluations better capture the regional variability in economic evaluations after controlling for the national trend (Rabe-Hesketh, Skrondal, and Pickles 2004).

ANES measures respondents' retrospective economic evaluations by asking the following question:

> How about the economy? Would you say that over the past year the nation's economy has gotten better [1], stayed the same [3] or gotten worse [5]?

Variation in these measures hence reflects the cross-sectional differences in public perception of the nationally important problems and the state of national economy.

I also introduced a set of social-demographic control variables (number of response categories in the square brackets) namely, age cohort [6-point scale]; education [7-point scale]; interest in politics [3-point scale]; interest in public affairs [4-point scale] and dummy-coded party identification. In order to spare the degrees of freedom for the model, I did not include the variables for which I did not find significant effect in a preliminary analysis, such as gender, and vote intention.

In addition to the micro-level cross-sectional indicators, my model accommodates aggregate *macro-level* measures. These macro-level measures capture the time-series variation in political trust. Note, that in any given micro-level ANES subsample these macro-level indicators are constants, not variables.

On the macro-level, my measures replicate as closely as possible the state of the national and media issue agendas, as well as the public issue agendas at each point of

time in my analysis. I agree with Behr and Iyengar (1985, 49) who argue that analysis of the "agenda-setting that ignores real-world conditions will arrive at severely inflated estimates of media influence." Therefore, I employ both real-world and media indicators of the issue salience in my analysis capturing, respectively, the objective degree of issue importance for the nation, and the volume of media attention that the issue attracts.

To operationalize the shifts in the *economic issue salience* over time I included four variables tapping into different dimensions of domestic economic performance at each point of time in my analysis. I employed two real-world indicators of the state of domestic economy, i.e.: inflation and unemployment, and two subjective indicators: Index of Consumer Sentiments (ICS), reflecting public perception of the state of the U.S. economy and the front-page story-count of the articles dealing with the U.S. economy in the nation's leading newspaper—the *New York Times* (NYT). The reason for including all four variables is that public knowledge about the national economy may come from multiple sources, with real-world cues (unemployment and inflation), personal experience (ICS), and media coverage of the economy (NYT issue attention) being the most important (Ansolabehere, Meredith, and Snowberg 2011).

The annualized indices of unemployment and inflation come from the Bureau of Labor Statistics.[44] Note that since I merge the yearly macro-level data into the ANES micro-level data, each respondent in a given year receives the same score for the macro-level variables. For instance, if the unemployment was 9.7% in 1982, each 1982 respondent receives a score of .097 for unemployment.

[44] More information about the data can be found at: http://www.bls.gov/data/

The measure of the volume of media attention to the economy is operationalized as the count of the *lead articles* (Ansolabehere, Meredith, and Snowberg 2011) covering domestic economic issues on the front page of NYT. I borrow the data from the Policy Agendas' Project, which has developed an extensive database sampled from the NYT Index.[45] This database consists of more than 37.000 stories assigned into one of the 27 policy domains and covering the period of 1946-2005.[46]

To reproduce the historical pattern of media coverage of the national economy, I counted the number of NYT front-page articles falling into the economic domain. I then calculated the percentage of stories in the economic domain each year by dividing the number of mentions in this domain by the total number of stories coded that year[47].

The front-page articles may reproduce as close as possible historical shifts in the media issue agendas (see Behr and Iyengar 1985). As Fogarty (2005) argues, the front page of any newspaper signals what stories editors find most important and interesting to the public as well as to the news profession. This is especially true for the NYT as the agenda-setter for other printed news outlets (Ibid.).

[45] The data used here were originally collected by Frank R. Baumgartner and Bryan D. Jones, and were distributed through the Department of Government at the University of Texas at Austin. More information is available at www.policyagendas.org. Neither NYT nor the Policy Agendas project, are responsible for the analysis reported here.

[46] http://www.policyagendas.org/page/datasets-codebooks#new_york_times_index

[47] While some might argue that the story-count approach might undermine the validity of the constructed index, same strategy has been extensively used in public opinion literature (see e.g. Behr and Iyengar 1985; Ebrging, Goldenberg and Miller 1980). I checked the external reliability of the constructed measure by correlating it with the real-world economic indicators. The correlation between the NYT Economy and unemployment (.30) is both strong and in the expected direction, whereas the correlation between the NYT Economy and inflation (-.10) is negative. This squares with the previous findings, suggesting that NYT economic coverage is more skewed towards unemployment than inflation stories (see e.g. Fogarty 2005).

Previous studies argued that issue mentions by the NYT provides an efficient way to measure issue salience (Zhu 1992). As the NYT is considered the most prestigious national newspaper, its coverage is indicative of all national media coverage on a given issue (Winter and Eyal 1981). It may be particularly suitable for studying media issue priming since it is considered the most adequate estimate of media content for comparison with national opinion polls (Ibid.). Some studies levied methodological criticisms against using NYT as a nationally representative source (see Zhu 1992). However, Jenkins and Perrow (1977) compared the issue coverage of NYT, *Chicago Tribune,* and *Los Angeles Times* concluding that, the NYT is basically a more complete version of the same news.

Media is not the only source influencing public national economic judgments (de Boef and Kellstedt 2004; Erikson, MacKuen, and Stimson 2002). Therefore, in addition to the NYT index, I employed the *Index of Consumer Sentiments* (ICS), as an indicator of public perceptions about the state of the national economy.

The reasoning for using ICS as a measure of national economic issue salience deserves a brief explanation. First, people's perceptions of the economy are shaped by their personal observations as well as the media coverage of the economy (cf. Behr and Iyengar 1985; Haller and Norpoth 1997).[48] Secondly, many studies show a small media priming effect for economic issues (Haller and Norpoth 1997; Soroka 2002). Finally, media coverage of the economy may not adequately represent economic reality (Fogarty 2005, 169). Therefore, ICS may be a more reliable measure of economic issue salience, particularly because it is not limited to a single informational source.

[48] The relationship between the economic news coverage and perceived issue importance is of course more complicated. For more nuanced insights see e.g. Blood and Phillips (1995); Goidel and Langley (1995); Hester and Gibson (2003); Wu et al. (2002).

ICS has been frequently employed in public opinion research (cf.de Boef and Kellstedt 2004; Erikson, MacKuen, and Stimson 2002; Goidel and Langley 1995; Harrington 1989; Horner 2008; Lewis-Beck 1988; Mutz 1992; Myers and Caniglia 2004; Wu et al. 2002). It is a composite measure reflecting public perceptions of personal and national economic conditions and consists of the indicators, which are retrospective ("are things not better that they were") and prospective ("looking ahead"), as well as personal ("you and your family") and national ("the country as a whole") in nature (de Boef and Kellstedt 2004). ICS has been measured on the quarterly basis since 1954 and on the monthly basis since 1978. It is derived from the following five questions:[49]

1. We are interested in how people are getting along financially these days. Would you say that you (and your family living there) are better off or worse off financially than you were a year ago?
2. Now looking ahead–do you think that a year from now you (and your family living there) will be better off financially, or worse off, or just about the same as now?
3. Now turning to business conditions in the country as a whole–do you think that during the next twelve months we'll have good times financially, or bad times, or what?
4. Looking ahead, which would you say is more likely–that in the country as a whole we'll have continuous good times during the next five years or so, or that we will have periods of widespread unemployment or depression, or what?
5. About the big things people buy for their homes–such as furniture, a refrigerator, stove, television, and things like that. Generally speaking, do you think now is a good or bad time for people to buy major household items?

[49] To calculate the ICS, relative scores (the percent giving favorable replies minus the percent giving unfavorable replies, plus 100) are first computed for each of the five index questions and rounded to the nearest whole number. Next, the sum of the five relative scores, is divided by the 1966 base period total of 6.7558, and a constant of 2.0 is added to correct for the sample design changes from the 1950s:

$$ICS = \frac{Q1 + Q2 + Q3 + Q4 + Q5}{6.7558} + 2.0$$

Each item and each index as a whole is scored on a 200-point scale representing the net balance of positive and negative opinion, with 100 representing the neutral point (Erikson, MacKuen, and Stimson 2002).

I take the annualized measure of ICS for each year the ANES survey was taken.[50]

Whereas people may refer to various information sources to make the impressions about the state of national economy, media typically is the only source of information about the *international* and *national defense* issues available to the general public. Therefore, I operationalize international/defense issue domain salience as the volume of front-page coverage of these issues in the NYT. The approach used here was identical to the operationalization of the economic news coverage described above.

To establish the *mediational link* between the priming issue agendas and public judgments about the trustworthiness of the government, I employed the macro-level indicators of the national importance judgments and retrospective economic evaluations. These variables are the annualized measures of the respective ANES questions (MIP economy, MIP international and retrospective economic evaluations). Switching from the individual- to the aggregate-level, these macro-level measures now reflect a proportion of respondents who identify economic, and international/defense issues as nationally important, and capture the mean level of retrospective economic evaluations in public in a given year.[51] Note, that on the macro-level the variation in these measures reflects the cross-time variability in public perceptions of the nationally important problems and the state of national economy.

[50] As ANES usually runs surveys in mid-November, there is no reason for additionally including the ICS data from the previous year

[51] The metrics of the aggregated variables reflects the original coding of respective variables on the individual level. Since the MIP variables are binary [0; 1], the aggregate level measure is simply a proportion of respondents who scored 1 on the scale. Retrospective economic evaluations are measured on a 3-point scale. Therefore, on the aggregate level this variable is represented as the mean value on the scale in a given year.

Model

I test the following mediation model of political trust attitude priming (figure 8.1). The model is conceived on the micro- and macro-levels, or within and between (cluster) levels using the multilevel SEM terminology.[52] Political trust attitude is modeled as a latent variable on two levels. On the micro-level, the latent trust variable is modeled based on the entire cross-sectional sample. On the macro-level, this variable appears as a function of the group-level (year-average) indicators of political trust.

The proposed model includes structural parts on both levels. On the micro-level, the latent political trust attitude is regressed on a set of the individual-level background variables (age and education), measures of respondents' interest in politics and public affairs, party identification, and MIP considerations and retrospective economic evaluations.

On the macro-level, the model accommodates several mediation pathways to test for the mediation hypothesis of political trust (*H1*). Note that the mediation part of the model on the macro-level represents the hypothesized relationship between the priming issue agendas, national importance judgments and political trust attitude (figure 5.1). The mediating variables—national importance judgments and retrospective economic evaluations—exert a direct effect on public judgments about the trustworthiness of the government. These variables also mediate the indirect effect of the priming issue agendas—the real-world indicators of economy (unemployment and inflation), subjective perception of the economy by the mass public (ICS), and media coverage of the economic and international and defense issues (NYT front-page story count).

[52] In the multilevel SEM framework, the micro (within year) and macro (between years) covariances are estimated separately and the results are generalized on both levels (Hox 2011).

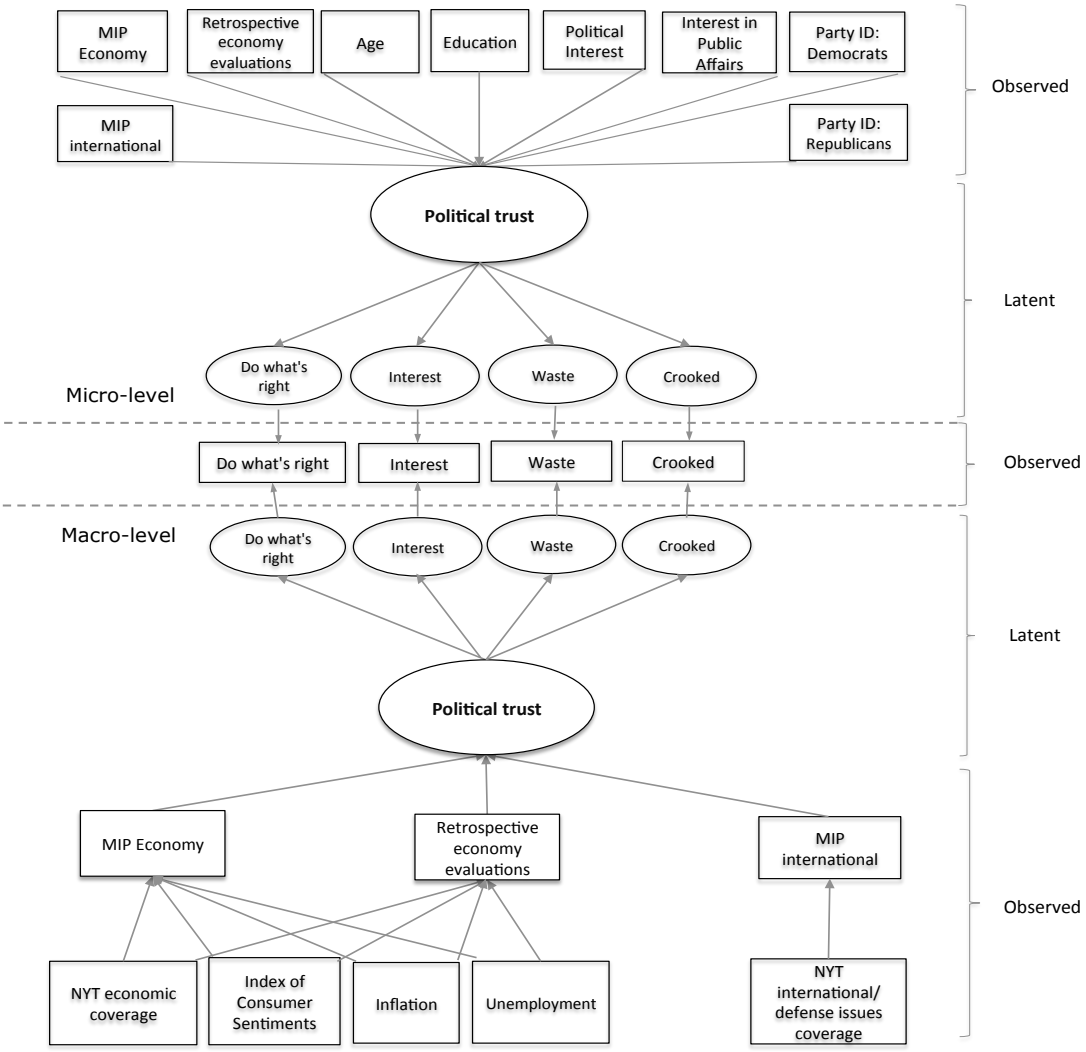

Figure 8.1. Proposed model of the agenda-setting effect on political trust attitude

Notes: the errors are omitted for the sake of model's clarity

The model is fitted in M*plus* 6.1 using Bayesian inference via Markov chain Monte Carlo (MCMC) integration method and Gibbs sampler (de Boef and Kellstedt 2004). Bayesian SEM approach has several advantages to the frequentist estimation methods (de Boef and Kellstedt 2004). It relaxes the assumption of the asymptotic distribution of the covariance matrix of the observed data (Lee 2007). This often-

unrealistic assumption implies that the data are independent and identically distributed, follow the multivariate normal distribution, and have a large sample size, particularly on the macro-level. Besides, Bayesian estimation provides a more natural and simpler mediation analysis in multilevel models (Gelman and Hill 2007). As parameters are treated as random variables instead of fixed values, mediation analysis in multilevel models is conceptually natural in the Bayesian framework (Yuan and MacKinnon 2009). Besides, Bayesian mediation analysis provides more credible intervals for indirect effects in complex mediation models.

The Bayesian approach is also preferable in complex models (e.g. with categorical indicators, mediation and interaction effects, models with the small sample size on the macro-level) since it is computationally more efficient than the likelihood-based approaches (Shor et al. 2007). Likelihood-based estimators require at least 40 clusters for the estimates to be reliable (Meuleman and Billiet 2009). Bayesian estimation in turn, allows for accurate estimation of variance components with as few as just 10 clusters, providing there are more than at least 30 individuals nested within a cluster (Shor et al. 2007). In addition, Bayesian framework provides a different approach to the missing data imputation since they are treated as extra parameters that need to be estimated (Congdon 2006)[53].

Because in a Bayesian framework posterior values depend on the researcher's prior beliefs about the data, it requires specification of *prior distribution* of the

[53] In Bayesian framework each parameter is viewed as a random variable with a certain distribution and estimates a degree of uncertainty about a parameter. Contrasting frequentist approach, the probability statement here is attached to the parameter, but not to the data. Similarly, missing data are viewed as unknown with an associated probability distribution, which can be estimated based on the prior information and the data. Thus, Bayesian approach calculates posterior distribution of the mean and estimates its probability distribution adequately capturing the associated uncertainty.

variables. Typically, priors are specified following either subjective or objective approaches. The subjective approach implies imposition of analyst's subjective belief (usually based on the summary of the past findings, e.g. meta-analysis) about the size on an effect. Objective approach argues against introducing subjectivity into statistical analysis and suggests using the priors which are minimally informative and represent a wide range of the possible true parameter value. The objective priors are based on the uniform finite non-flat prior distribution and add very little prior information (and therefore insert minimal subjective bias) to the data (Press 2003). I follow the latter approach and use M*plus'* default priors.[54]

Unlike the frequentist SEM framework, there are no traditional model fit criteria for the multilevel SEM with Bayesian estimators[55]. Instead, an analyst should rely on the set of diagnostics tools. Such tools are the *traceplots* of the posterior samples, which reflect the parameter value at time *t* against the iteration number (this can be thought of as the separate time-series plot for each variable), and the *posterior parameter distribution plots* (histograms or kernel density plots) reflecting the properties of the posterior distribution parameters' sample to determine convergence of the model. In Bayesian framework, convergence reflects the idea that in theory the Gibbs Sampler will eventually reach a stationary distribution, at which point no further changes to the estimation process will be possible. If the model has converged, the traceplots will move around the mode of the distribution with no apparent indication of trending.[56]

[54] While some may argue that the fitted model may be sensitive to prior assumptions, it is worth considering that as the sample size gets larger the posterior distribution will be driven more by the data than the prior.

[55] Posterior predictive p-values, which can be used to determine the fit of the model based on the Chi-square test of H_0 against H_1,, and DIC criteria allowing to compare the nested models, are currently not available for the multilevel SEM models in M*plus* as well as in any other statistical package.

[56] This typically refers to the substantial parameters, but may not be the case with the intercepts, residual variances and thresholds unless a very large number of iterations is specified.

This also indicates that autocorrelation[57] in the chain is low, the effective sample size is reasonably high and the obtained posterior estimates are accurate. Posterior parameter distribution plots should resemble a bell-shaped curve, which however, does not need to be symmetric. Note also, that posterior distributions for the variance parameters will typically be right skewed.

In order to increase the reliability of estimates, I set the convergence criterion at 15,000 iterations and a thinning factor of 50.[58] This means that after the initial burn-in stage, the MCMC chain was set to converge for 750,000 iterations (15,000 x 50), of which only every fiftieth iterations was recorded for the estimation purposes to reduce the autocorrelation in the chain. In order to increase the reliability of the outcomes, I additionally specified five interacting MCMC chains having the same target distribution but different mixing properties, thus increasing the number of total iterations to 3,750.000 of which 75,000 (15,000 iterations x 5 chains) were recorded for the estimation purposes[59]. Both traceplots and posterior parameter distribution plots demonstrate that the chains were mixing very well and posteriors have reached the stationary distribution[60]. Trace plots demonstrate no obvious trending. This indicates that the model is indeed supported by the data (Appendix I).

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[57] Autocorrelation between thresholds' parameters is not considered abnormal

[58] Using the default specification in M*plus*, the model requires approximately 3.000 iterations with a thinning factor of 1 to converge. Parameter estimates in the model with M*plus* defaults (3.000 iterations) and the model with higher number of iterations (750.000 iterations x 5 chains) are very similar.

[59] M*plus* does not currently have the Raftery-Lewis convergence diagnostic criterion. Therefore, to stay more conservative I specified a substantially larger number of iterations that would typically be required.

[60] Even in case of the Retrospective Economic Evaluations—the variable with a large number of missing values—the chain mixes adequately well. There is an evidence for a moderate autocorrelation in the variables measuring respondents' economic concerns, i.e. MIP economy and Retrospective economic evaluations. This however, is expectable since respondents' economic evaluations are the functions the state of the economy in the past periods.

Results

My primary interest is in the structural part of the model on both levels and especially, in the mediational path on the macro-level. However, in the SEM tradition, the fit of the measurement part is typically assessed first. Table 8.1 reports unstandardized and standardized estimates of the effects in the model and their standard errors. Figure 8.2 summarizes the main results.

On the micro-level, the factor loadings are within-group components of trust attitude. The measurement part at this level represents a familiar pattern of factor loadings discussed in details in Chapter 7.[61] It is therefore more interesting to proceed with the discussion of the measurement part on the macro-level.

On the macro level factor loading coefficients are much larger than their individual level "mirror-loadings." This reflects the fact that the measurement errors accumulate at the individual level (Hox 2010). However, the magnitude of the factor loadings at the between level also reflects the extent of their invariance over time. Recall, that the thresholds of the *Waste* item do not necessarily vary in the same direction with the rest items and also with the latent trust variable. Relatively low factor loading of this item ($\lambda = .809$) reflects this macro-level pattern. This, as we know from chapter 7, is not the case with the *Do What Is Right* and *Interest* items, for which the factor loadings closely approach 1.0 and only partially concerns the *Crooked* item ($\lambda = .915$).

Because of the categorical indicators of political trust construct, the threshold parameters—transitions from one response category to another—represent the random effects in the model. Conceptually, the macro-level model defines separate regression equations for each time-point (subsample) under analysis, with the separate

[61] Multigroup SEM method (chapter 6) is related to the multilevel SEM methodology (chapter 7), as both types of models do separate individuals into separate groups (Cowles and Carlin 1996).

regression intercepts/thresholds for each subsample. Instead of reporting the coefficients for the intercepts/thresholds at each time-point separately, M*plus* estimates their variance. The model suggests that there is a substantial variability in the proportion of responses to the trusting vs. distrusting categories in all variables except for the *Interest* over time.

First, let us look at the *Do what is right* item. As one can see, there is a considerable cross-time variation in the threshold (*v2*) capturing the transition between the *"most of the time"* and *"only some of the time"* responses to the question "*How much of the time do you think you can trust the government in Washington to do what is right.*" The same refers to the *Waste* item, for which the variation in threshold v2 (*"government wastes some of money"* vs. *"doesn't waste much of it"*) appears highly significant. All the thresholds of the *Crooked* item are statistically significant similarly indicating considerable variation in responses to the question over time. Of all four items, only the threshold of the binary *Interest* item does not demonstrate significant cross-time variation. Once again, significant variability in the proportion of responses to the political trust questions speaks in favor of the chosen multilevel approach to the analysis. This cross-time thresholds' variability could potentially support the idea that issue priming may affect responses to the ANES trust-in-government questions.

Let me now refer to the structural parts of the model on the micro- and macro-levels. I begin by summarizing the effect of respondents' perceptions of the nationally important problems and retrospective economic evaluations on political trust attitude on the micro-level. Respondents' concerns about international affairs (MIP international) and retrospective economic evaluations exert a significant effect on people's judgments about the trustworthiness of the government. Because political

trust is modeled as latent, I can further argue that change in the perceived issue importance and economic judgments shifts the patter of responses to the ANES trust-in-government questions.

When concerns about the international affairs increase among respondents, so does political trust ($\beta = .048$; $p < .001$).[62] In other words, respondents concerned about the international issue domain begin to evaluate the government more positively on the ANES Trust-in-Government scale.

For respondents who consider international affairs the most important problem in the nation—that is those scoring 1 on the MIP 0-1 scale—the level of political trust changes by .048 standard deviations on the latent factor score.[63] While not high in magnitude, this effect is averaged across the entire time-span of the data, including the time-points when people were and were not concerned about the international affairs. I will return to this in the next chapter and show that when the national importance judgments are not primed in the public, they do not produce a significant effect on political trust.

When people think the economy either did not improve or worsened in the past year, their trust in government declines ($\beta = -.185$; $p < .001$). This similarly indicates that the change in the issue salience alters the pattern of responses to the ANES trust-in-government questions. In this case respondents with more economic concerns tend to choose more negative response categories when judging about the government trustworthiness. This squares with the previous findings reporting that trust in

[62] This interpretation concerns each individual year in the series, but can be extended on the entire time-series.

[63] Because MIP international is a binary variable, to interpret its effect I refer to the partially standardized, or standardized by dependent variable only output. The partially standardized coefficient for the MIP international is 0.048 – the same as the fully standardized coefficient.

government largely depends on the government's past economic performance (Hetherington 1998; Hetherington and Rudolph 2008).

At the same time, the effect of the MIP economy on political trust is not significant, and also runs in the direction opposite from the expected.[64] This is apparently a suppression effect caused by the inclusion of an alternative measure of economic performance, i.e. retrospective economic evaluations, and should be treated as a model's artifact. When retrospective economic evaluations are removed from the model, the effect of MIP economy on trust turns both negative and significant.

Let me now refer to the control variables. Over the entire series, political trust significantly declines with age (β = -.057; $p < .001$), but does not depend on the educational attainment. Interest in politics and public affairs also does not exert an effect on political trust on the individual level. As far as party identification is concerned, Democrats are not significantly different from either Republicans or Independents in their level of trust in government. However, the latter trust the government significantly less than the partisans do (β = -.056; $p < .001$). These findings are consistent with conclusions made in the past.

On the micro-level the model explains 4.3% of the variance.[65] However, due the nature of my investigation I am more concerned about model's performance on the macro level. Here proportion of the explained variance indicates how well the shifts in the national and media and public agendas capture the cross-time variability in political

[64] In the time-series analysis of Hetherington and Rudolph (2008) the effect of MIP Economy on crime is similarly positive and not significant.

[65] On the within-level, the R^2 for the multilevel SEM models with categorical dependent variables in Mplus is calculated following McKelvey and Zavoina's (2007) approach. While this R^2 approximates the R^2 in the OLS regression, it should rather be interpreted as the "rough guide" for the percentage of variance explained in the model. On the between level, the R^2 for categorical indicators is the regular R^2 coefficient (http://www.statmodel.com/discussion/messages/12/7924.html?1313420500).

trust. On the macro-level the model performs remarkably well, indicating that shifts in the priming issue agendas explain about 71% of the cross-time variability in the collective measure of political trust.

The findings on the macro level seem to favor my proposed causal mechanism responsible for the political trust attitude priming (*H1*). However, path analysis draws an even more complex picture of how priming issue agendas influence public national importance judgments and how they both change public judgments about the trustworthiness of the national government.

First, let me address the inference link in the tested mediational pathway—that is the effect of the priming issue agendas on the national importance judgments. My findings confirm that what public considers important at any point in time largely depends on the issues on the radar of the national and media agendas. When the media coverage of international and defense issues increases, public concerns about this issue domain similarly increase ($\beta = .554$; $p < .05$).[66] This effect on the macro-level is much stronger than on the micro-level. I borrow an extensive explanation from Erickson and colleagues (Erickson, MacKuen and Stimson 2002, 84-85; italics in the original) to explain the difference:

> "For the typical individual at the *micro* level, […] perceptions may be more noise than a signal. Analysis at the *macro* level reduces the noise to acceptable levels. Whatever bizarre, confusing, or personally biased perceptions individual citizens bring to the evaluation task, in the aggregate all that idiosyncratic variation is self-canceling. The aggregate of individual expectations then becomes a quite orderly response to the flow of […] news".

[66] On the between level the indicators of public agenda represent the variability in proportions of responses to these questions over time.

The relationship between the economic issue agendas and perceived importance of the economic issue domain in public is somewhat more complicated.[67] First, media attention to the economic issues does not have a statistically significant effect on either people's economic sentiments or on their retrospective economic evaluations. An immediate explanation could be that economic issue domain economy in the media may not adequately represent the objective state of the national economy. The effect of inflation on the MIP economy is similarly not significant. Unemployment, however, has a significant effect on the perceived importance of the economy on the macro-level. When unemployment increases, so does the proportion of the people who consider economy as the nation's most important problem ($\beta = .302$; $p < .05$). There is however, no effect of unemployment on the retrospective economic evaluations on the macro level.

On the contrary, ICS has a negative effect on the retrospective economic evaluations ($\beta = -.476$; $p < .001$) but it does not reach statistically significant effect on people's economic sentiments.

Let me now proceed with the explanation how the change in the national importance judgments produces influence on public evaluations of the government. Both public economic sentiments and concerns about international and defense issues produce significant effect on the macro-level measure of trust. The direction of this effect is consistent with the theory. When the public becomes more concerned about the international and defense issues, the level of public trust in government expectedly surges ($\beta = .506$; $p < .001$). On the contrary, when public economic sentiments become sourer, political trust expectedly declines ($\beta = -.503$; $p < .05$). While the effect of the

[67] To be objective, this is of course because I include more economic indicators in my model

macro-level measure of MIP economy is in the expected direction, its effect on trust fails to reach statistical significance (β = -.043; p =. 438).

So far I have discussed only direct effects in the model. However, the mediation analysis also assumes indirect effects of the priming national and media issue agendas on political trust. How strong are these indirect effects compared to the direct effects of the national importance judgments on political trust? The Sobel's test allows to estimate whether a mediator variable carries an effect of the exogenous variables to the dependent variable; i.e., whether the indirect effect of the priming issue agendas on political trust that occurs via the mediating variable—national importance judgments—is significant (Sobel 1982; see also Mackinnon, Lockwood, and Williams 2004; Preacher and Hayes 2004; 2008). I compute Sobel's test to estimate the indirect effect on trust for two exogenous variables: ICS and NYT international/defense issue domain coverage.[68]

The effect of the international news coverage exerts a significant indirect effect on trust (b = .009; p = .018) and the effect of the ICS on trust is marginally significant (b = .010; p = .052). Note that the effect of the ICS on political trust is positive, since higher values of the index reflect a higher public confidence in the economy leading to the higher levels of trust. Although I cannot assess the magnitude of reported unstandardized coefficients, it is nevertheless clear that wile the shifts in the priming issue agendas influence political trust indirectly, the main route by which this change exerts an effect on public judgments about the government is via the public national importance judgments (MIP considerations).[69] I will return to this point in the next

[68] Testing for the effect of unemployment on political trust is redundant, since the direct effect of the MIP economy on trust is not significant.

[69] This can be derived from the computational formula of the Sobel's test.

chapter and will show that the effect of perceived issue importance on trust varies depending on the magnitude of the issue priming in the media.

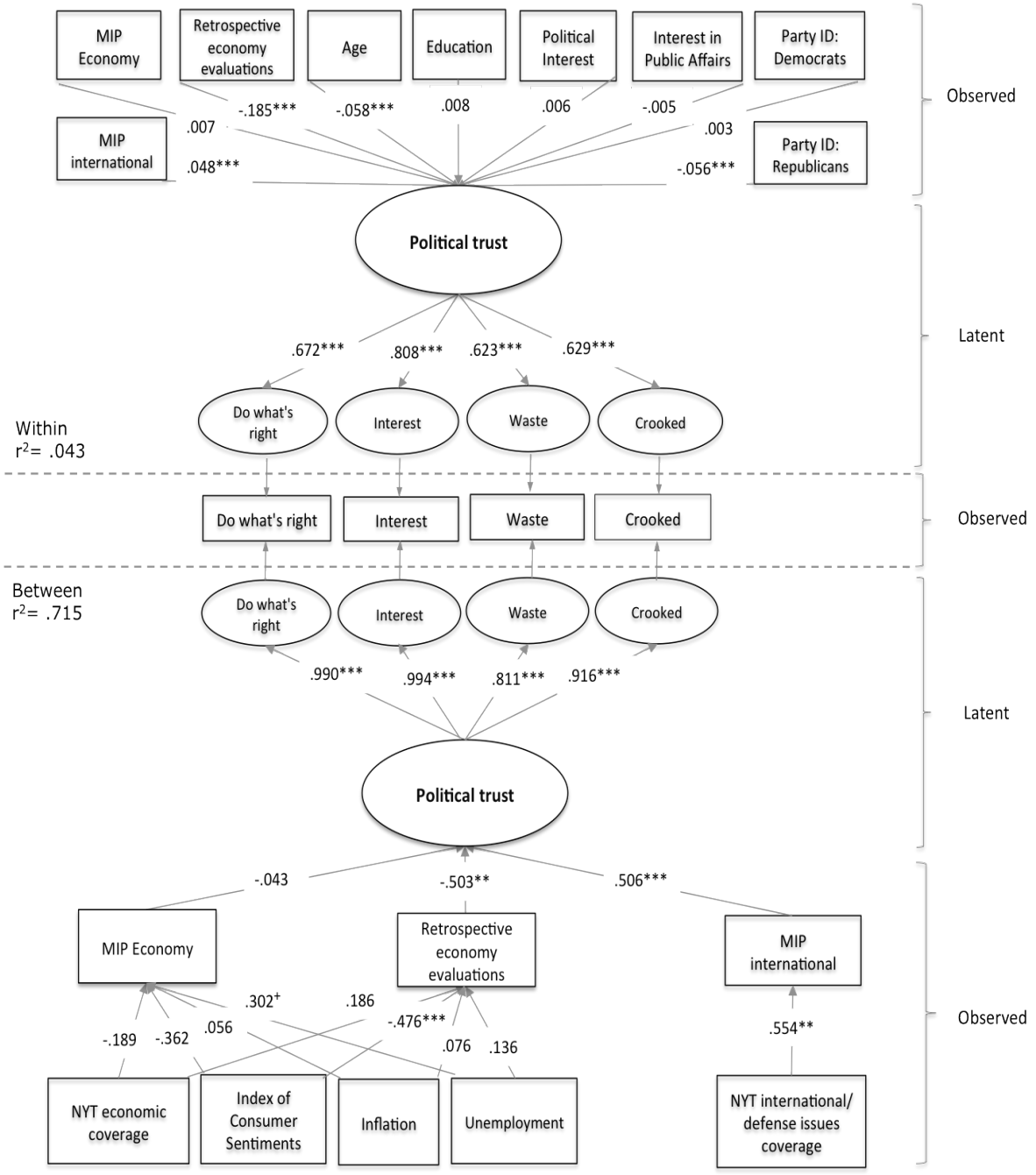


Figure 8.2. The causal mechanism of political trust attitude priming

Notes: Fully standardized (STDYX) coefficients are reported; ***-significant at .001; **-significant at .01; *-significant at .05; †-significant at .10

Errors are not presented for the sake of model's clarity. Because there is more than one dependent variable on the between level, reported R^2 coefficient refers to the explained variance of the latent Trust variable. No model fit indices are available for the multilevel SEM models with Bayesian estimators.

Detailed information about the model's parameters is provided in the Table 8.1

Table 8.1. Model estimates

Model parameters		Unstd. Estimates	Stand. Estimates	Posterior S.D.	*p*-value (1-tailed)	95% C.I	
Within-level							
Trust by	Do What's Right	1.000	0.671	0.008	0.000	0.656	0.686
	Interest	1.516	0.808	0.008	0.000	0.793	0.823
	Waste	0.878	0.623	0.008	0.000	0.607	0.639
	Crooked	0.893	0.629	0.007	0.000	0.614	0.643
Trust on	MIP Economy	0.015	0.007	0.010	0.246	-0.013	0.027
	MIP International	0.116	0.048	0.010	0.000	0.028	0.067
	Retrospective economic evaluations	-0.126	-0.185	0.009	0.000	-0.203	-0.166
	Age	-0.032	-0.057	0.009	0.000	-0.074	-0.041
	Education	0.004	0.008	0.009	0.182	-0.010	0.026
	Polit. Interest	0.008	0.006	0.010	0.261	-0.012	0.025
	Interest in public affairs	-0.004	-0.005	0.010	0.316	-0.023	0.014
	ID (Democrat)	0.007	0.004	0.009	0.334	-0.013	0.021
	ID (Independent)	-0.158	-0.056	0.009	0.000	-0.073	-0.038
Variances	MIP Economy	0.178	1.000	0.000	0.000	1.000	1.000
	MIP International	0.140	1.000	0.000	0.000	1.000	1.000
	Retrospective economic evaluations	1.771	1.000	0.000	0.000	1.000	1.000
Residual variance	Trust (within)	0.785	0.957	0.004	0.000	0.949	0.964
Explained variance (R^2)	Do What's Right		0.451	0.010	0.000	0.431	0.471
	Interest		0.653	0.013	0.000	0.629	0.678
	Waste		0.388	0.010	0.000	0.368	0.408
	Crooked		0.395	0.009	0.000	0.377	0.414
	Trust (latent)		0.043	0.004	0.000	0.036	0.051
Between-level							
Trust by	Do What's Right	1.000	0.991	0.013	0.000	0.955	0.999
	Interest	1.229	0.995	0.010	0.000	0.964	1.000
	Waste	0.464	0.829	0.126	0.001	0.470	0.948
	Crooked	0.470	0.922	0.067	0.000	0.728	0.979
Trust on	MIP International	1.750	0.505	0.190	0.015	0.063	0.794
	MIP Economy	-0.093	-0.043	0.310	0.448	-0.627	0.554
	Retrospective economic evaluations	-0.244	-0.507	0.263	0.056	-0.877	0.155
MIP Economy on	Consumer Sentiment Index	-0.007	-0.349	0.393	0.231	-0.896	0.565
	NYT Economic Issues' Coverage	-0.001	-0.191	0.229	0.231	-0.546	0.329
	Unemployment	7.347	0.311	0.197	0.073	-0.117	0.651
	Inflation	0.584	0.070	0.331	0.426	-0.513	0.725
Retrospective Economic Evaluations on	Consumer Sentiment Index	-0.047	-0.480	0.220	0.033	-0.817	0.039
	NYT Economic Issues' Coverage	0.002	0.172	0.197	0.203	-0.253	0.521
	Unemployment	17.091	0.145	0.218	0.265	-0.310	0.536
	Inflation	2.856	0.067	0.239	0.394	-0.411	0.518
MIP International on	NYT Internatnl. Issues' Coverage	0.006	0.535	0.189	0.016	0.050	0.778
Intercepts	MIP Economy	0.576	2.442	3.843	0.295	-6.057	8.253

	MIP International	0.121	0.666	0.399	0.030	-0.021	1.537
	Retrospective economic evaluations	5.590	4.464	2.340	0.040	-0.499	8.585
Indirect effects	NYT International Issue Domain Coverage on Trust	0.009	--	0.018	0.006	0.000	0.024
	Consumer Sentiment Index on Trust	0.010	--	0.052	0.010	-0.002	0.035
Thresholds	Do What's Right *v*1	-0.220	-0.163	0.317	0.295	-0.775	0.533
	Do What's Right *v*2	1.891	1.402	0.318	0.000	0.790	2.100
	Interest *v*1	-0.044	-0.054	0.623	0.465	-1.117	1.390
	Waste *v*1	0.222	0.174	0.169	0.138	-0.167	0.509
	Waste *v*2	2.232	1.746	0.170	0.000	1.405	2.085
	Crooked *v*1	-0.611	-0.475	0.166	0.007	-0.806	-0.134
	Crooked *v*2	1.221	0.949	0.166	0.000	0.618	1.290
Residual variance	Do What Is Right	0.008	0.018	0.024	0.000	0.001	0.087
	Interest	0.007	0.011	0.020	0.000	0.000	0.070
	Waste	0.042	0.313	0.175	0.000	0.102	0.779
	Crooked	0.017	0.151	0.112	0.000	0.042	0.470
	MIP economy	0.029	0.472	0.169	0.000	0.199	0.844
	MIP International	0.023	0.714	0.166	0.000	0.395	0.993
	Retrospective economic evaluations	0.826	0.513	0.156	0.000	0.266	0.858
	Trust (between)	0.121	0.295	0.181	0.000	0.070	0.754
Explained variance (R^2)	Do What's Right		0.982	0.024	0.000	0.913	0.999
	Interest		0.989	0.020	0.000	0.930	1.000
	Waste		0.687	0.175	0.000	0.221	0.898
	Crooked		0.849	0.112	0.000	0.530	0.958
	MIP economy		0.528	0.169	0.000	0.156	0.801
	MIP International		0.286	0.166	0.000	0.007	0.605
	Retrospective economic evaluations		0.487	0.156	0.000	0.142	0.734
	Trust (latent)		0.705	0.181	0.000	0.246	0.930

Model statistics	
N of observations	24931
N of clusters	16
N of dependent variables	7
N of independent variables	11
N of continuous latent variables	2
N of free parameters	49

Notes: The Bayesian p-value is the part of the posterior distribution that is below/above zero for a positive/negative estimate. Therefore, zero p-values for the residual variance, means that there is no part of the posterior estimate that is below zero and is not related to the significance of the coefficient. *v* stands for the items' thresholds.

Discussion

My analysis puts into a single causal nexus change in the priming issue agendas, shifts in the national importance judgments and public evaluations of the trustworthiness of the "government in Washington."

Consistent with the offered hypothesis (*H1*), results demonstrate that priming effect of the national and media issue agendas on public judgments about the trustworthiness of the national government occurs through the change in the national importance judgments. The mediating variables—national importance judgments and economic evaluations—significantly carry the influence of the independent variables—national and media issue agendas—on political trust. Moreover, the size of the direct effect mediators exert on trust is greater than size of the indirect effects of the national and media agendas. This suggests that the national importance judgments not only mediate but also enhance the effect of the priming issue agendas on political trust. Notably, an SEM test of the indirect effect employed in my model provides more robust results of the mediation effects as well as consistency of the hypothesized mediational model.

While my findings support the proposed mediational pathway between the national and news media issue agendas and political trust, they also shed more light on the causal relationship between the priming issue agendas, perceived issue importance in the mass public and political trust.

First, my analysis demonstrates that shifts in the national importance judgments in the mass public follow the pattern of change in the real-world and media indicators of the issue importance. This conclusion supported by the cross-sectional times-series data, corroborates Miller and Krosnick's (2000) inference hypothesis previously tested

only using experimental design. The causal relationship between the priming issue agendas and perceived issue salience in the mass public is remarkably robust for over three decades accounted for by the data. This relationship is also very strong. Change in the volume of NYT attention to the international and defense news alone explains roughly one third (.29) of the cross-time variation in public concerns about the issue domain; the change in the economic issue agendas explains about a half (.49) of the cross-time variation in public economic perceptions, and over a half (.53) of the temporal variation in national economic judgments.

Second, shifts in the national importance judgments and economic evaluations—the mediating variables in my model—explain most of the corresponding cross-time variation in political trust. Again, this causal relationship proves to be both robust and strong. Together, shifts in the national importance judgments and economic evaluations account for more than a half of the cross-time variation in the macro-level political trust. Moreover, taken together, change in independent and mediating variables explains a remarkable 70 percent of the cross-time variation in political trust on the macro level.

Thanks to the multilevel design, conclusions about the mechanism of trust attitude priming can be extended on the micro-level as well. Apart from the possibility to generalize findings on the individual-level, my model also accounts for some cross-sectional variation in the micro-level political trust. While my model is only able to predict about 5 percent of the cross-sectional variation in trust, it is worth remembering that the micro-level estimates are attenuated as they are averaged over time.

For the first time in political trust research, my model also accounts for the latent nature of political trust attitude. Until now, TS analyses have employed a single-item measure of political trust attitude. I use a superior psychometric alternative—the 4-item ANES Trust scale modeled on a latent level. The latter is especially important since—parallel to assessing the mediational hypothesis of political trust attitude priming—the measurement part of the model allows me to examine the patter of change in responses to political trust questions following the change in the priming issue agendas and the national importance judgments. Thanks to the multilevel design of my model, I am able to control for these changes simultaneously on the micro- and macro-levels.

Besides of substantive findings, my model also pushes methodological frontiers in political trust research. The MLSEM analysis applied to the TSCS data provides a more nuanced insight into the nature of political trust and its cross-time dynamics. Of course, as all TSCS designs, my analysis suffers from a relative sparseness of the data. Whereas the macro-level time-series analysis typically includes quarterly measures of trust, my analysis is only captures biannual variation in political trust attitudes. The advantage of the chosen analytical strategy however, is that it provides an insight into the causal mechanism responsible for trust attitude priming. In light of the previous findings (see Hetherington and Rudolph 2008), there is a high likelihood that my general findings would also be corroborated by the quarterly time-series data.

CHAPTER 9

WHEN PRIMING OCCURS? THE MODERATORS OF TRUST ATTITUDE PRIMING

> People are entitled to their own opinions; they are not entitled to their own facts
>
> Daniel Patrick Moynihan, Senator from New York

In this chapter I turn to the examination of the macro-level moderators of political trust attitude priming. First, I test the dosage hypothesis that the volume of media attention to the issue moderates the weight people attach to this issue when they judge about the trustworthiness of the government. Next, I proceed with the discussion of the issue obtrusiveness hypothesis and explore whether unobtrusive issue priming exerts stronger effects on trust than obtrusive issue priming.

Method

In the previous chapter I have established that trust in government moves in response to the change in the priming issue agendas and national importance judgments in the public. I have previously established that the national issue importance judgments mediate the effect of the priming issue agendas on trust. In this chapter I further examine how the change in the volume of media attention to a certain issue may affect the criteria people use to judge about the trustworthiness of the national government. Particularly, I will test the *dosage hypothesis:* whether the change in the volume of media attention to the economic and foreign issue domains changes the weight people attach to these issues when they think about the "government in Washington" (*H2*-*H3*). In statistical terminology, my goal is to establish whether the priming issue agendas

moderate the effect of the national importance judgments on trust[70]. In addition, I will also test the long-debated *issue obtrusiveness hypothesis* (*H4*): whether the effect of unobtrusive—such as the international/defense—issues on trust is stronger than the effect of the obtrusive issues—such as the national economic importance judgments.

The *dosage hypotheses* (*H2-H3*) imply that the effect of perceived issue importance on trust among individuals is dependent upon the intensity of respective issue coverage in the media. Therefore, for empirical testing of the dosage hypothesis, control condition must be included in a design (Roskos-Ewoldsen, Roskos-Ewoldsen, and Carpentier 2008). This control is typically a situation in which no media priming occurs. In the survey approach to media priming this requirement can be satisfied in one of the two ways. The first approach is to measure the individual level of media exposure within a certain time-window and include it into the media priming equation (Miheye 2007). This approach however is often unrealistic when using the data which are not tailored to examine priming effects. Since the ANES does not measure the individual level of exposure to the salient issues, the described strategy could not be applied in this study.

The second approach does not measure individual level of exposure to the priming issue agendas directly. Instead, it implies that if the issue is primed in the media, people will receive at least some exposure to the issue (Miheye 2007). This means that the effect of cognitive priming can be modeled by measuring the change in the weight people place on the primed issues in their evaluations of the government. From a modeling perspective, this is typically achieved by including an interaction effect between the issue priming in the mass media and change in the evaluation

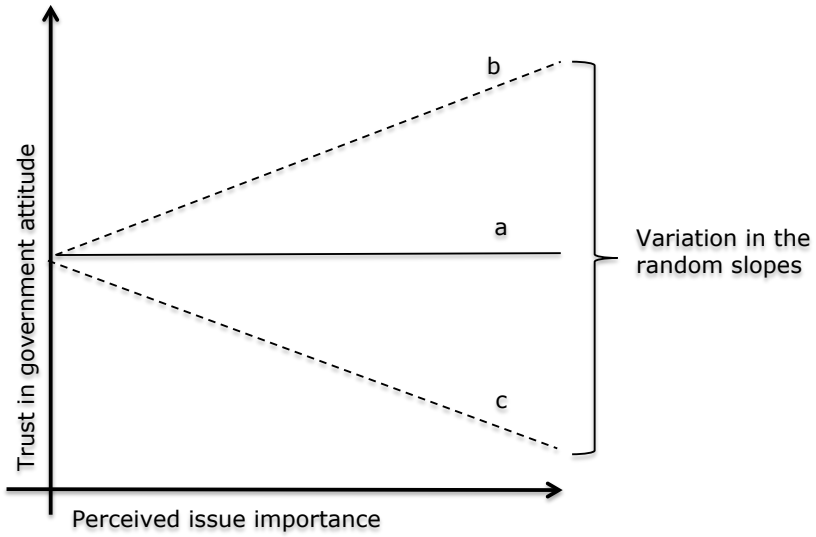
[70] From statistical standpoint moderation implies that the effect of one predictor on the outcome variable is dependent upon another predictor (Baron and Kenney 1986).

criteria towards a political object, i.e. government in Washington, among the respondents. In my analysis I follow this route.

Priming theory is multilevel by design. It implies several processes that function at the different levels of analysis (see fig. 5.2). The change in the media coverage is a macro-level phenomenon, whereas the change in the standards people use to evaluate political objects occurs at the micro-level (see Behr and Iyengar 1985). Therefore, the relationship between the perceived issue importance and media issue priming should be expressed as a cross-level interaction. Conceptually, the cross-level interaction implies that the effect of the individual level variables on the outcome is moderated by the macro-level variables.

Accommodating this cross-level interaction in the model permits to test whether the effect of perceived issue importance on trust depends on the intensity of the media issue priming. This can be achieved by allowing the effect of perceived issue importance on trust to have a random slope on the micro-level, and setting the macro-level measure of issue priming a task to explain the variability in this random slope. More formally, the slope of the effect of perceived issue importance on trust in the model can vary depending on the intensity of the issue priming in the media. This design is known as a multilevel random slope model.

Fig. 9.1 provides a conceptual illustration of a random slope model. In this model, the slope of the effect perceived issue importance exerts on trust varies over time, and depends on the extent of the issue priming in mass media.



a - The effect of perceived issue importance when the issue is not primed in the media
b - Positive interaction effect between perceived issue importance and issue priming in the media
c - Negative interaction effect between perceived issue importance and issue priming in the media

Figure 9.1: The random slope model

Figure 9.1 reflects the hypothesized relationship between the media issue priming and perceived issue importance (*H2–H3*). When the issue is not primed in the media, this issue domain is not expected to play any significant role in public judgments about the trustworthiness of the government (a). However, a change in the media issue priming can change the slope of the effect of perceived issue importance on trust. If people evaluate the government more favorably on the issue (e.g. on the foreign affairs), the increase in the importance of this domain in public evaluations of the government should lead to the increase in political trust (b). When the issue is less favorable for the government (e.g. economy), increased weight of the national economic importance judgments in the government evaluations should cause a decline in trust (c). Note, that since the model implies a cross-level interaction term, the magnitude of

the priming determines the strength of the relationship (the steepness of the slope) between the perceived issue importance and trust. In subsequent sections I will discuss the empirical strategy for modeling the relationship between the media issue priming and political trust attitude.

Data and variables

In this chapter I generally refer to the same set of variables I employed when exploring the causal mechanism of trust attitude priming (Chapter 8). There are however, a few noteworthy differences on both levels of analysis.

My measure of the dependent variable—trust in government attitude—is operationalized as the function of four observed items: *Do What Is Right, Interest, Waste* and *Crooked.* As before, I model trust in government on the latent level.

On the individual level, in addition to the age, education, party identification, and interest in politics and public affairs, I additionally control for the race [0–White; 1–Non-white] and sex [0–Men; 1–Women] of respondents. The rationale for adding these variables is that both race and gender might serve as important cues for respondents when attaching national importance to the primed issues (see e.g. Iyengar and Kinder 1985).

In order to capture the salience of economic and international/defense issues in public, I include respective ANES measures (MIP economy and MIP international) in the model. Since my focus in this chapter is on the media priming, I keep retrospective economic evaluations out of the model, as people's economic evaluations may be more affected by the objective economic situation than by its interpretation in the media (cf. Books and Prysby 1999).

On the macro-level, I focus on the volume of attention economic and international/defense issue domains receive in the media. In order to capture the cross-time variation in the media issue priming I employ the front-page coverage of economic and international/defense issues in the NYT as the indicators of media issue priming. I discussed the operationalization of both measures in detail in Chapter 8.

To provide a more intuitive interpretation of the intercept and slope parameters in the model I centered the macro-level variables—measuring the volume of media attention to the issue—at their grand means. The intercept coefficients in this case would indicate the effect of the predictors on political trust when the media priming is at its mean; i.e., when the issue receives its normal attention in the media. The slope coefficients would indicate the change in the effect of perceived issue importance on trust when media issue priming goes above or below the mean.

Descriptive statistics of the variables are provided in Appendix H.

Model

To test the dosage hypotheses (*H2*-*H3*), I employ the multilevel SEM approach with random slopes[71] (Hox 2010; Mehta and Neale 2005; Rovine and Molenaar 2000). The interpretation of random effects, if statistically significant, would entail that the predictive effect of a perceived issue importance on trust in government varies over time and depends on the intensity of the issue priming in the media. Figure 9.2 describes a proposed priming model using the multilevel SEM notation popularized by Linda and Bengt Muthén (Muthén and Muthén 2007; see also Hox and Roberts 2011; Preacher, Zyphur and Zhen Zhang 2010):

[71] I opt out random intercepts from the model, since my theory implies that when there is no priming, the group lines should cross at x=0

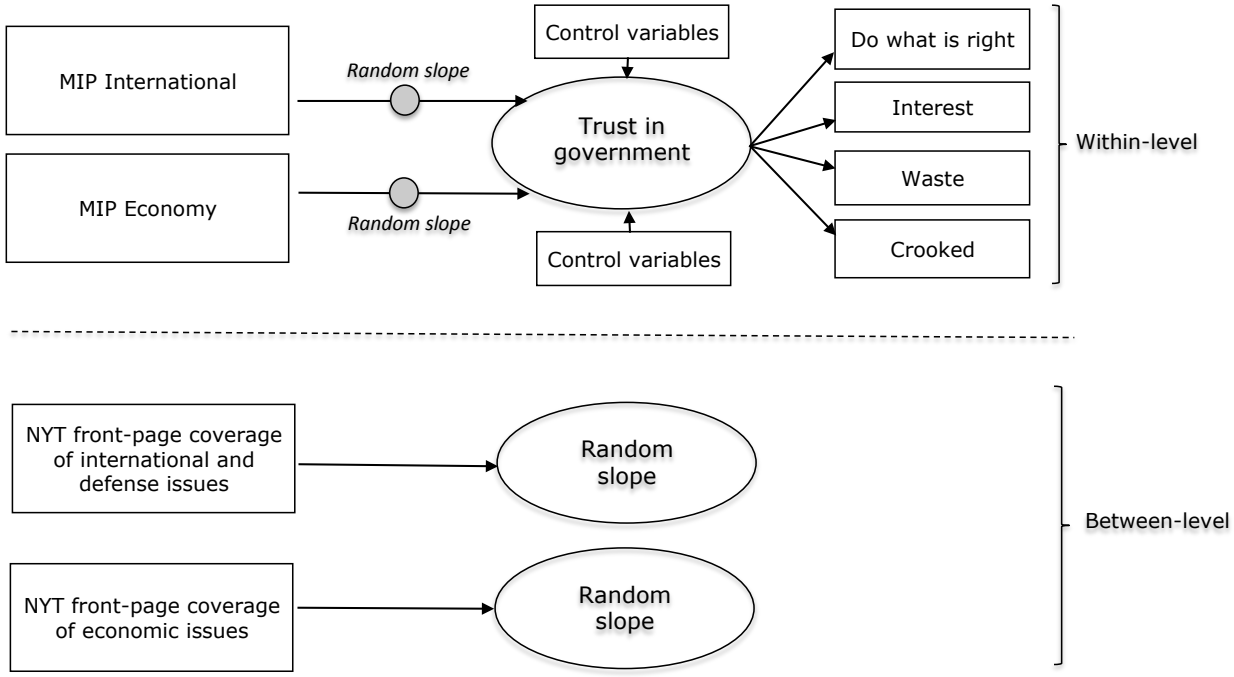


Figure 9.2: The "dosage-response" model of political trust attitude priming (Muthén and Muthén (2007) notation)

Notes: control variables and errors are omitted from the figure for the sake of model's clarity

Note, that this model could be represented using the mixed effects' model notation suggested by Skrondal and Rabe-Hesketh (2004), as suggested by fig. 9.3.[72] I also used this notation to visualize the cross-level interaction effects in Chapter 4 (fig. 4.2). However, since Skrondal and Rabe-Hesketh's (2004) notation stems from the tradition of regression diagrams, its use in conceptually different multilevel SEM framework may be confusing (see e.g. Hox and Roberts 2011). Nevertheless, I provide it here as a reference for the readers, less acquainted with the ML SEM notation.

[72] Hox, de Leeuw, and Brinkhuis (2010) and Hox and Roberts (2011) describe both types of notation in details.

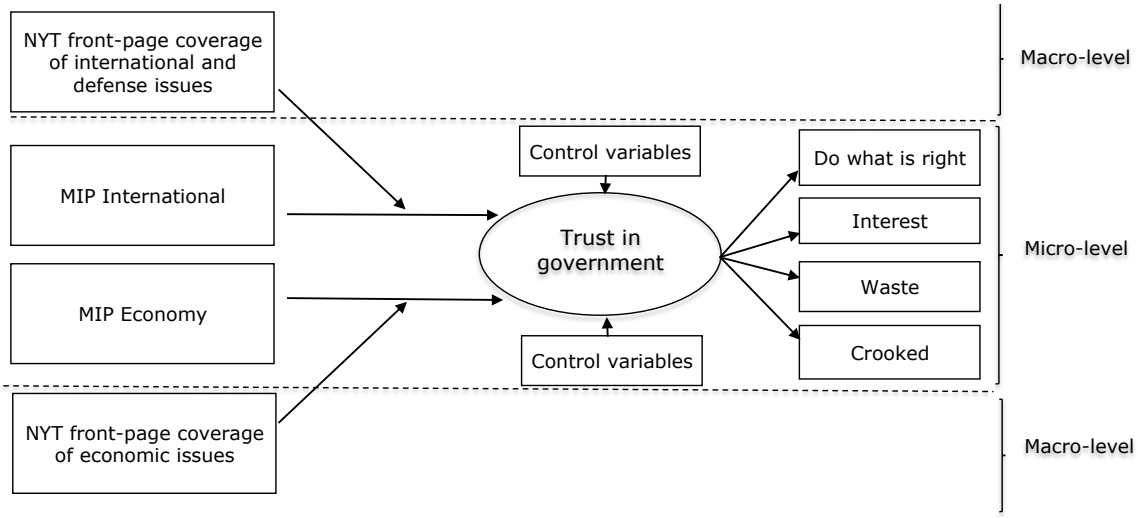


Figure 9.3: The "dosage-response" model of political trust attitude priming (Skrondal and Rabe-Hesketh (2004) notation)

Notes: control variables and errors are omitted from the figure for the sake of model's clarity

In-line with the multilevel SEM notation, the tested model (fig. 9.2) consists of within- and between-parts representing respectively, the micro- and macro-levels in the analysis. On the within level, the filled circles on the arrows from the perceived issue importance to political trust attitude represent the random slopes, which encompass the cross-time variability of the effect of this issue domain on public judgments about the trustworthiness of the government. These random slopes appear as continuous latent variables varying across clusters (time-points) on the between level of the model.

The variation in the slopes is explained by the cross-level interactions between the measures of media issue priming on the macro-level and perceived issue importance on the micro-level. This is achieved by regressing the random slopes on the measures of the NYT issue coverage (Muthén and Asparouhov 2009). The intercept of this regression equation represents the average value of the random slope—the effect

perceived issue importance exerts on trust—when the volume of media attention to this issue is at the mean.[73] Put simpler, the intercept is the effect of perceived issue importance on trust when NYT dedicates its normal level of attention to the issue.

On the micro-level, the latent four-item political trust scale is regressed on a set of the individual-level background variables (age, sex, race and education), measures of respondents' interest in politics and public affairs, party identification, and MIP considerations.

On the macro-level, the model accommodates the measures of the media issue priming—proportion of the economy and international/defense news on the front page of the NYT. The effect of the media issue priming on the public perception of the perceived issue importance is allowed to vary across clusters (i.e. over time). Recall that modeling of cognitive priming requires including a control condition (a situation when the issue is not primed in the media) in the design. In the above model this control condition will be a situation when the media issue coverage is at the mean—that is when the issue receives its normal level of media attention and is not primed.

In the literature, study of the media priming effects is typically conducted separately for each issue (see Miller and Krosnick 2000). I conduct a more efficient test by modeling the priming effects of the two key issues at the same time. My model also approximates the real-world situation more closely. After all, in the real world people do not receive the isolated messages about each issue domain "one at a time," but may be getting messages about multiple issues at the same time. However, it is of course not likely that both issues—domestic economy and foreign affairs—would be equally primed in the media at the same time.

[73] This is because the variables at the macro level have been grand-mean centered.

The model is fitted in M*plus* 6.1 using Bayesian inference via MCMC integration method and Gibbs sampler (de Boef and Kellstedt 2004). The estimation of random slopes in the multilevel SEM models is computationally intensive and therefore Bayes estimates may be preferred over the least squares or maximum likelihood methods (see e.g. Asparouhov and Muthén 2010). Asparouhov and Muthén (2010) show that in the random coefficient models the Bayes estimates are closer to the true values when compared to the classical estimation methods, i.e. the least squares and maximum likelihood, especially when the sample size is relatively small.

Similar to the agenda-setting model I set the convergence criterion at 15,000 iterations with a thinning factor of 50 and choosing five interacting MCMC chains. Traceplots, posterior parameter distribution-and autocorrelation plots indicate a good fit of the model to the data (Appendix J).

Results

Table 9.1 reports parameter estimates and their standard errors. Note that only unstandardized coefficients are available for the multilevel random coefficient models in M*plus.*[74] Figure 9.3 summarizes the main results.

[74] In the multilevel random coefficient models the variance of *y*-variables varies with the values of *x*-variables. Therefore, it is not clear how to standardize the coefficients in the model (see: http://www.statmodel.com/discussion/messages/12/612.html?1291576165).

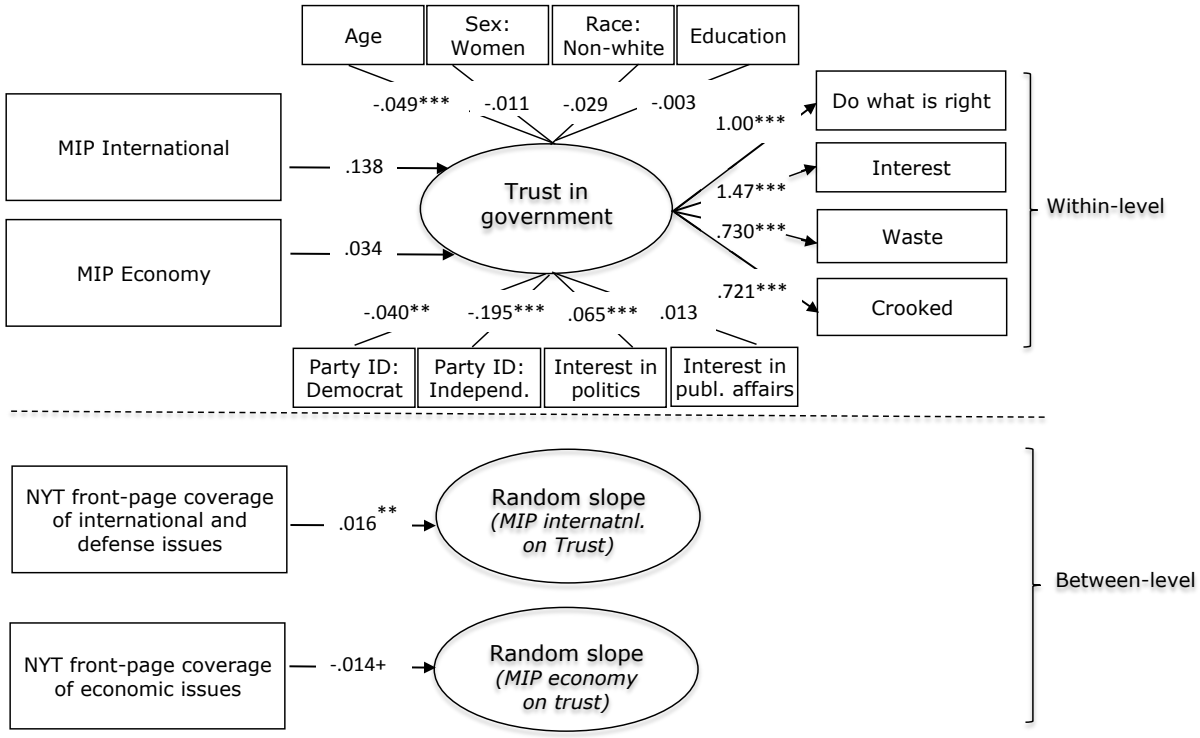


Figure 8.4. The "dosage–response" model of political trust attitude priming

Notes: Unstandardized coefficients are reported; ***-significant at .001; **-significant at .01; *-significant at .05; †-significant at .10. Errors are not presented for the sake of model's clarity.

In M*plus* output the random intercept coefficients of the cross-level interaction between the NYT issue priming and MIP considerations appear at the between level. However, since the cross-level interaction effect encompasses both the micro- and macro-level processes, the random intercept can also be considered at the micro-level, as the effect of MIP considerations on trust when the media priming is at the mean level (table 8.1).

My primary interest in the model lies in the random-effect coefficients (the measurement part of this model is of less interest—the latent factor approach was used for measurement rather than substantive purposes). I first turn to the effects of perceived issue importance judgments on trust in government when the issues are not primed in the media (or when the media attention to the issue is at its mean). Recall that these effects are in fact, the intercepts of the between-level equations in which the random slopes are regressed on the measures of the NYT issue priming. As the model suggests, when the economy and international/defense issues are not primed in the

media, perceived issue importance "attached" to these domains exerts no effect on trust. The effects of international/defense (b = .138; p = .109) and economic issue importance judgments (b = .034; p = .388) on political trust do not reach statistical significance when these issues are not primed in the media.

My control condition—the situation in which media priming does not occur—favors the research hypothesis *H2*, stating that national importance judgments will have no effect on public judgments about the trustworthiness of the government when respective issues are not primed in the media. What remains to be answered is whether the weight people place on the economic and international and defense issues in their evaluations of the government increases as these issues become primed in the media (*H3*).

Significant cross-level interaction effects speak in favor of the offered hypothesis. One percentage-point increase in the NYT attention to the international and defense issues leads to the increase in the effect of the MIP international on political trust by .016. This effect is significant at $p < .05$. One percentage-point increase in the NYT coverage of the economic issues causes the change in the effect of the MIP economy on trust by -.014. In both cases, directions of these effects are consistent with the theory. As the international and defense issues appear primed in the media, political trust increases; when the economy is primed, the level of political trust among the respondents goes down.

Since the effect of national importance judgments on trust was modeled as random, I can further estimate the magnitude of the media issue priming required for this issue to begin exerting a statistically significant effect on trust (at $\alpha = .05$) by

plugging in the values into the cross-level interaction parameter. This is required to test my *issue obtrusiveness* hypothesis (*H4*).

The effect of the MIP international on trust becomes significant (at $\alpha = .05$) when the volume of issue coverage in NYT increases by about 5.9 percentage points above the mean: .138 + (.016 * 5.9) = .232, which exceeds the standard error (.112) by more than a factor of 1.96. For the MIP economy to exert an significant effect on trust (at .05-level), media priming of the economic issues must increase by roughly 19 percentage points compare to the normal volume of attention to this issue domain: .034 + (-.014 * 19.1) = -.234, which similarly exceeds the standard error of .119 by more than a factor of 1.96.[75] These results suggest that public judgments about the trustworthiness of the government appear far more sensitive to the change in the international/defense issue agendas in the media than to economic issue agendas (*H4*).

Knowing the cross-time variability in the volume of media attention to the international/defense and economic issues (appendix H) further allows one to estimate the change in the effect perceived national importance of these issue domains among the public exerts on political trust. By referring to the historical maximum of the volume of media attention to these issue domains (37.3% and 32.8% for the international/defense and the economic issues respectively on the grand-mean centered scale)[76] I can calculate the magnitude of this effect.

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[75] Since M*plus* does not provide the standard errors of the estimates in the model with Bayesian estimators (confidence intervals and p-values are given instead), the calculated standard errors are based on the confidence intervals (Higgins and Green 2011) and should be considered as approximate http://www.mrc-bsu.cam.ac.uk/cochrane/handbook/chapter_7/7_7_7_2_obtaining_standard_errors_from_confidence_intervals_and.htm).

[76] This translates to 55.0% and 75.7% on the uncentered percentage scale

When the volume of media attention to international issues reaches its maximum, the effect of perceived importance on trust increases from .138 (the intercept, or the effect of MIP international on trust when the issue is not primed in the media) to .138+(.016*37.3) = .735. This represents a 45 times' increase from the control condition, when the issue is not primed in the media. Figure 9.3 shows how the increase in the volume attention to international affairs changes the weight people put on this issue domain when judging about the trustworthiness of the government.[77]

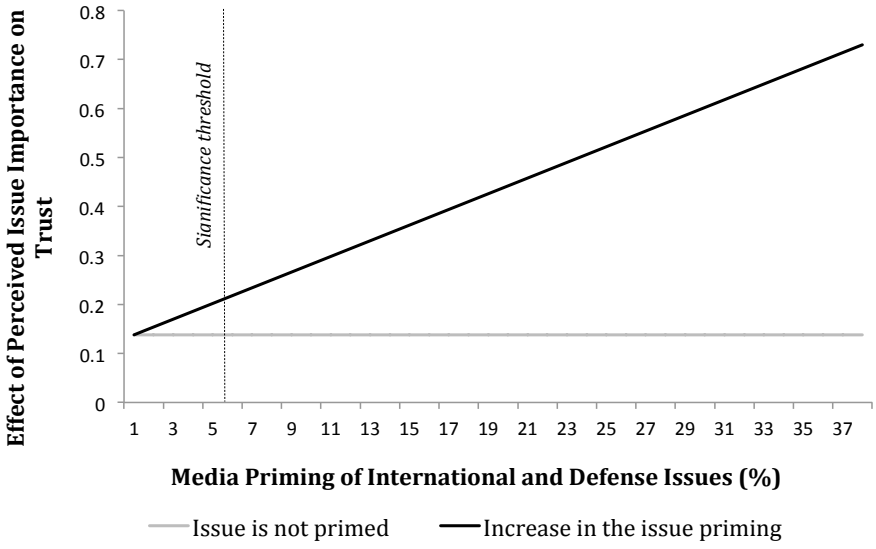

Figure 9.3. International/defense issues domain priming and change in the effect of perceived issue domain importance on trust

When the media priming of the economic issues reaches its historical maximum, the effect of perceived importance of economic issues (MIP economy) on trust increases from .034 to .034+(-.014*32.8) = -.425—a change of more than 20 times (fig. 8.6).

[77] Unfortunately, M*plus* does not allow computing marginal (or conditional) effects of the amount of change in trust produced by a unit change in the media issue priming within the program.

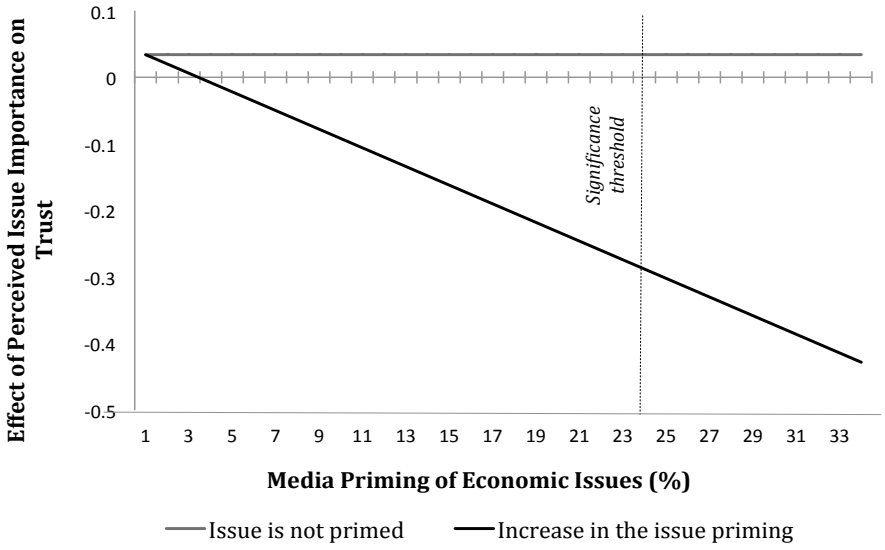

Figure 8.6. Economic issue domain priming and change in the effect of perceived issue importance on trust

Reported findings speak strongly in support of the *dosage* and *issue obtrusiveness* hypotheses of political trust (*H2* and *H3*). When the issue is not primed in the media, people do not put additional weight on this issue domain when they judge about the trustworthiness of the government. When the volume of media attention to the issue increases—in other words, the issue becomes primed in the media—it amplifies the effect of perceived issue importance on public judgments about the trustworthiness of the government. The same pattern has been found for both the international/defense and economic issues, thus providing a strong support to the dosage hypotheses of trust attitude priming (*H2* and *H3*).

Remarkably, in the tested model, the effect of media priming on political trust holds controlling for the respondents' individual characteristics and for the latent variable nature of the trust in government attitude. This is particularly important, since in the past studies the priming hypothesis of trust was tested on the macro level data

(see Hetherington and Rudolph 2008) and has not until now been confirmed by controlling for the individual-level variables.

My findings also corroborate the *issue obtrusiveness* hypothesis (*H4*). Change in the volume of media attention to international/defense issue appears to have a much stronger effect on public judgments about the trustworthiness of the government compare to the change in volume of media attention to the economic issues.

Table 8.1. Model estimates

Model parameters		Unstdzd. Estimates	Posterior S.D.	*p*-value (1-tailed)	95% C.I	
Within level						
Trust by	Interest	1.473	0.067	0.000	1.349	1.612
	Waste	0.730	0.026	0.000	0.681	0.782
	Crooked	0.721	0.024	0.000	0.676	0.770
Trust on	Age	-0.049	0.007	0.000	-0.063	-0.036
	Sex	-0.011	0.021	0.304	-0.052	0.031
	Race	-0.029	0.034	0.199	-0.095	0.038
	Education	-0.003	0.012	0.394	-0.027	0.021
	Polit. interest	0.065	0.017	0.000	0.033	0.098
	Interest in public affairs	0.013	0.013	0.151	-0.012	0.038
	Party ID (Democrat)	0.040	0.023	0.037	-0.004	0.085
	Party ID (Independent)	-0.195	0.036	0.000	-0.267	-0.124
Thresholds	Do What's Right $v1$	0.364	0.076	0.000	0.216	0.518
	Do What's Right $v2$	2.541	0.083	0.000	2.383	2.710
	Interest $v1$	0.744	0.114	0.000	0.525	0.976
	Waste $v1$	0.552	0.056	0.000	0.443	0.666
	Waste $v2$	2.492	0.064	0.000	2.371	2.620
	Crooked $v1$	-0.319	0.056	0.000	-0.426	-0.208
	Crooked $v2$	1.448	0.057	0.000	1.337	1.564
Residual variance	Trust (latent construct)	1.077	0.052	0.000	0.981	1.184
Between level						

Intercepts	MIP Economy	0.034	0.130	0.388	-0.218	0.300
	MIP International	0.138	0.116	0.109	-0.097	0.368
Random slopes	NYT Economy on MIP Economy	-0.014	0.009	0.057	-0.033	0.004
	NYT International on MIP International	0.016	0.007	0.015	0.002	0.029
Residual variance	MIP Economy	0.162	0.132	0.000	0.066	0.533
	MIP International	0.131	0.105	0.000	0.052	0.428

Model statistics	
N of observations	16.448
N of clusters	13
N of dependent variables	4
N of independent variables	12
N of continuous latent variables	3
N of free parameters	25

Notes: Standardized estimates and r^2 coefficients are not available for the multilevel random coefficient models. The Bayesian p-value is the part of the posterior distribution that is below/above zero for a positive/negative estimate. Therefore, zero p-values for the residual variance, means that there is no part of the posterior estimate that is below zero and is not related to the significance of the coefficient. The symbol *v* stands for the items' thresholds.

Discussion

Exploiting the advantages of the multilevel SEM approach, this chapter provides a deeper insight into the relationship between the news media issue agendas and political trust on the micro- and macro-levels. My analysis shows how—in addition to the individual-level predictors—public judgments about the trustworthiness of the national government are influenced by the change in the volume of attention media dedicates to the economic and international and defense issues.

Speaking broadly, my results support the theory that the cross-time dynamics of political trust attitude are largely explained by the shifts in the issue salience at the time of response. As the priming theory suggests, people's responses to the ANES trust-in-government questions indeed reflect the ideas at the forefront of their minds at the moment of answering.

The tested model based on the ANES TSCS data covering the periods of almost than four decades corroborates the offered *dosage hypotheses* of priming (*H2-H3*). The more prominent the issue domain becomes on the news stream, the greater is the weight people place on this issue when evaluating the government. On the contrary, when the media attention to either economic or international/defense issue domain is at its mean—that is, when the issue does not appear primed in the news media—respondents do not place any significant weight on either economic or international and defense issue domains when making judgments about the trustworthiness of the government.

Unstandardized coefficients do not allow me to directly assess the size of the effect of priming effects in my model. It is nevertheless clear that it is quite meaningful. When the volume of media attention to international/defense issues reaches its maximum, the effect of perceived issue importance on trust increases fourty-five times compared to the control condition. The effect of media priming of the economic issue domain is smaller, but nevertheless substantial. When the volume of media attention to the national economy reaches its historical maximum, the effect of perceived importance of economic issues (MIP economy) undergoes a twenty-fold increase.

The shift in the weight people place on the international/defense issue domain appears more sensitive to the change in the media attention to this issue domain. This finding corroborates the offered *issue obtrusiveness* (*H4*) hypothesis. When the news media attention to this issue domain increases by about six percentage points above the mean, the effect of perceived issue importance on political trust reaches statistical significance. The positive direction of the effect is consistent with the theory. When international and defense issues become more salient, the level of trust also increases.

For the economic concerns to exert a significant effect on trust, media attention to the economic issue domain must increase by roughly 22 percentage points compare to the mean. The negative direction of this effect is also consistent with the expectations. When economic concerns dominate public agendas, trust in government declines.

These findings further our understanding of the big picture of change in political trust in the last five decades. In order to explain why trust continues to decline but also changes abruptly in the relatively short periods of time we need to highlight two aspects of trust attitude priming.

First, the effect of news media priming on trust is asymmetric (see Hetherington and Rudolph 2008 for a cogent argument). Increase in the volume of media attention to economic, and international and defense issues increases their effect on trust. However, when the importance of these issues is low their effect of trust is not significant.

This asymmetry helps to explain why trust decreases during economic downfalls but fails to rebound when the economy improves. When the economy is in a tailspin, economic issues are highly salient for the people. This increases the negative effect of economic performance on trust. Yet, when the economy recovers, and people begin to care about economic performance much less, the effect of economy on trust is not significant. Thus, the effect of economy on trust represents a declining equilibrium. Paraphrasing Hetherington and Rudolph (2008), trust suffers more from the bad times than it benefits from the good ones. Therefore, even the relatively long and uninterrupted periods of economic growth—such as the periods of economic success during Reagan and Clinton's tenures—could not return trust to its "Halcion days'" levels.

As far as international and national defense issues are concerned, this asymmetric effect similarly explains the positive rallying effect on trust. It also explains the decline of trust when the rally-effects decay. Since very few people care about international and defense issues when the there is no objective threat in these domains, their effect on trust does not sustain and, consequently, trust regresses to its previous levels.

Second, we need to consider the pattern of change in the media issue coverage (fig. 8.1) and issue salience in public (fig. 4.1) to better understand the cross-time dynamics of trust. Figure 8.1 further illustrates the pattern of change in the news media attention to economic, and international and defense issues.

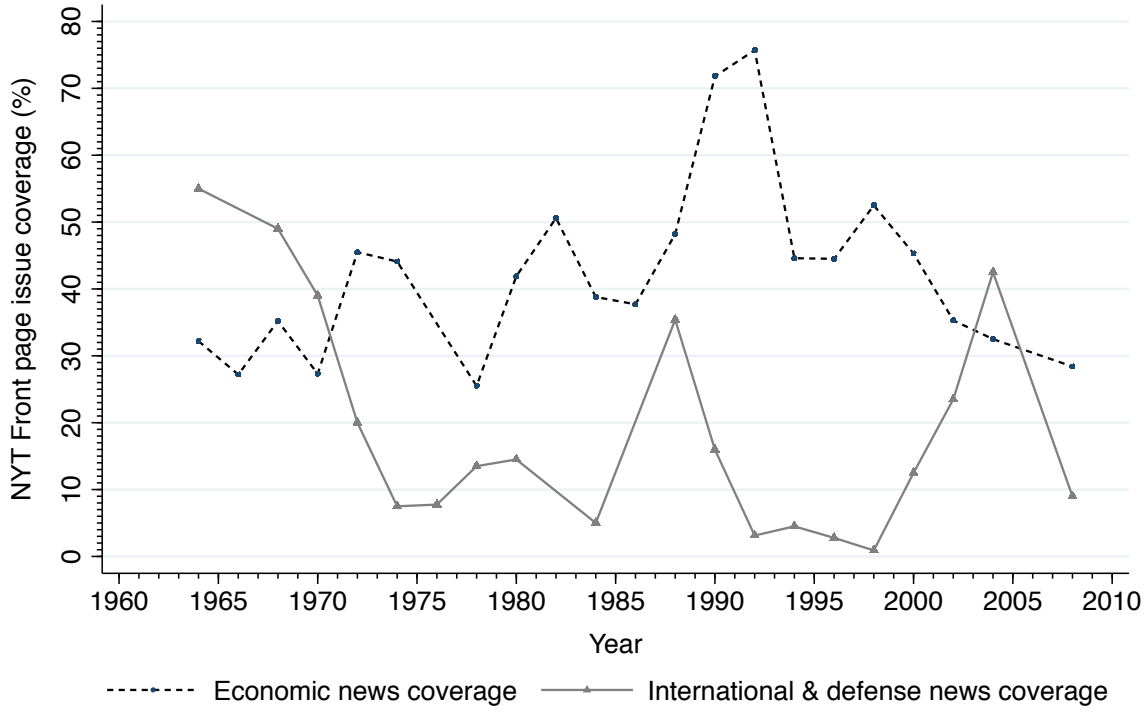

Figure 8.1. Change in the News Media Attention to Economic and International and Defense Issues

Notes: Proportion of attention dedicated to the issue domain on the front-page of the New York Times

Source: Author's calculations of the front-page issue coverage based on the New York Times Index obtained from the Policy Agendas Databank (http://www.policyagendas.org/).

As one can see, international and defense issues were high on the media agendas during the 1960s—the "Halcion days" of political trust. Since then, media interest in the international and defense issues remained particularly low, apart from a few spikes in 1980s and then in the early 2000s. On the contrary, economic news began to prevail since the 1970s, precisely capturing the decline in trust. News media interest in the economy has also been fairly high over time.

Again, my conclusions echo the findings of Hetherington and Rudolph (2008). The constellation of conditions in the post World War II United States—primarily the high salience of the outside threats and low priority of the economic concerns—produced unusually high levels of trust, as the people were primed to think about the government with external threats in mind. In subsequent periods, the salience of external threats began to diminish, but the importance of economic concerns increased. This increase in the economic issues' salience explains why trust has begun to decline in the 1970s.

My conclusions also bear some important micro-level implications. Until now, trust attitude priming has only been studied using the macro-level time-series data. This design limits the possibility for the individual level inferences. By contrast, my analytical strategy simultaneously captures the cross-time and cross-sectional variation in political trust, showing how both individuals and the mass public respond to the economic and international threats.

CHAPTER 10

PUTTING TRUST ON THE RIGHT-HAND SIDE: CONDITIONAL EFFECT OF TRUST ON POLITICAL ATTITUDES AND POLICY PREFERENCES

> "It's hard to deny that all the sound and fury, magnified through television and the Internet, coarsens the political culture. It makes tempers flare, helps breed distrust. And whether we politicians like to admit it or not, the constant vitriol can wear on the spirit"
>
> Barack Obama (2006) "The Audacity of Hope"

In this chapter I focus on the consequences of cross-time variability of public trust in government. I examine how the change in the issue domain salience conditions the effect of trust on public attitudes to the president (president feeling thermometer), and respondents' preferences concerning defense spending and help to blacks and minorities

Method

So far, I have been investigating the causes of the longitudinal variation in political trust. In this chapter I put trust on the right-hand side and analyze how the shifts in the issue domain salience condition the effect trust exerts on political attitudes and policy preferences related to the primed issue domain *(H5)*.

Since Miller's (1974) seminal study, researchers have argued that decline in political trust has a wide range of political consequences. However, scholars typically presumed a linear relationship between trust and political attitudes and preferences that it shapes. Increase in the level of trust—they would argue—leads to the increase in unconditional public support of the government programs in virtually all domains. By

the same token, when political trust declines, it should ameliorate the overall public support of the government programs.

This view however, does not square with the evidence that political trust itself moves in response to the change in the priming issue agendas (see Hetherington 2005; Hetherington and Husser 2011; Hetherington and Rudolph 2008). If people decide how much they trust the government based on the issues they consider most important at any given point of time, we would also expect trust to exert a stronger effect on political attitudes and policy preferences related to the primed issue domains. In other words, shifts in the issue domain salience should *moderate* the effect of trust on the attitudes and policy preferences attached to this issue domain.

In their recent paper, Hetherington and Husser (2011) disconfirm the long-lasting view that increase in trust leads to the increase in unconditional support for the government policies. Using the ANES panel and cross-sectional data they show that after the September 11 attacks political trust ceased to affect public preferences about redistribution and race-targeted policies but instead began to exert an effect on respondents' defense and foreign policy preferences. The authors derive explanations for their empirical findings from the attitude priming theory.

Recall that following the 9/11 attacks the public was primed to "think less about the parts of government that redistribute scarce resources and more about parts that provide safety and security" (Hetherington and Husser 2011, n/a; see also Bishop 2005; Langer 2002). As the salience of defense and foreign policy issues was high, the relationship between political trust and the anti-terrorist and foreign policy preferences appeared especially strong (Hetherington 2004; Hetherington and Husser

2011). At the same time, trust ceased to exert any effect on public preferences in the domains that were not primed in public.

The question whether shifts in the issue domain salience indeed condition the effect of trust on political attitudes and policy preferences (*H6*) should be approached in several steps. First, I need to determine whether the effect of trust on the outcome variables is non-stationary. For this purpose, the effect of trust must be allowed to vary over time. If the intercepts and slopes of this effect vary significantly over time, I can further investigate the sources of this variability.[78]

The next step is to establish whether the effect of trust indeed varies in response to the change in the priming issue agendas over time. For this, I need to introduce the macro-level predictors capturing the temporal change in the issue salience (1) and include cross-level interactions between issue salience and trust (2). Each task has an important substantive and statistical purpose. Macro-level measures of issue salience (the so-called main effects) are necessary to explain the cross-time variation in response variables—that is time-varying differences in people's attitudes and preferences, which I model as the dependent variables.[79] Cross-level interactions in turn explain whether shifts in the issue salience condition the effect of trust on the dependent variables:

*Issue domain salience*political trust ➔ domain-specific attitudes and policy preferences*

If these interactions turn out significant, this will show that shifts in the issue salience will indeed condition—that is either enhance of inhibit—the effect of trust on

[78] In the multilevel random coefficient models a separate regression equation is specified for each group (time-point). However, for the ease of interpretation, a variation in the slopes and intercepts rather than their group-specific estimates is provided.

[79] Recall that trust is modeled as an independent variable in these models. Therefore, including macro-level predictors will only explain variability in the dependent variables, but will not explain whether shifts in the issue salience condition the effect of trust on the dependent variables in question.

the attitudes and policy preferences attached to the primed issue domain. These interaction effects should also remove a substantial part of the cross-time variability in the effect of trust.

To test hypothesis *H6* empirically, I opt for a multilevel random effects design with observations nested within time-points (see Beck and Katz 2007). As before, the ANES pooled TSCS dataset provides an optimal vehicle for this analysis. TSCS analysis with random effects possesses numerous advantages over the ordinary least squares (OLS) methods. From a purely statistical standpoint, it accounts for parameter heterogeneity between time-points, which leads to correct estimation of standard errors. Second, it allows me to model the effect of trust as random over time. Finally, it provides a better fit to my substantive goals by letting me model longitudinal variation in the effect of trust as a function of macro-level predictors and cross-level interaction effects. In subsequent sections I will return to the discussion of TSCS models with random effects.

Data and variables

The purpose of this chapter is to demonstrate the cross-time variability in the effect of political trust on a range of political attitudes and policy preferences. Therefore, I fit several models, which employ different dependent variables.

Model 1: President feeling thermometer ratings. For several decades public opinion scholars had generally believed that feelings about the incumbent presidents affect trust (Citrin 1974; Citrin and Green 1986). More recently, Hetherington (1998) showed however, that not only feelings about the incumbent presidents affect political trust, but also the reverse is true. A simultaneous equation model Hetherington fitted

showed that trust in fact, has a larger effect on the president feeling thermometer than the reverse.

I build further on Hetherington's (1998) conclusion. If political trust affects people's feelings about the incumbents, it is also plausible that the effect of trust may be conditional on the shifts in the salience of economic, foreign affairs and government functions' issues. So far, there has been no empirical investigation about whether the effect of trust on the attitudes towards the President is conditional on the change in the issue salience. However, studies on presidential popularity may help outline the pattern of relationship between change in the issue salience, political trust and the presidential feeling thermometer ratings. I expect that when economic issues are primed in public, the effect of trust on the presidential feeling thermometer should decline. In other words, trust will become a less important ingredient of presidential evaluations when people think about the president more in terms of economy. At the same time, I expect that when international issues become primed, the effect of trust on the feeling thermometer ratings should on the contrary increase.

My dependent variable is the ANES presidential feeling thermometer ratings (VCF0428). The ANES has been recording people's feelings towards incumbent presidents since 1968 by asking respondents the following question:

> *I'd like to get your feelings toward some of our political leaders and other people who are in the news these days. I'll read the name of a person and I'd like you to rate that person using something we call the feeling thermometer. Ratings between 50 and 100 degrees mean that you feel favorably and warm toward the person; ratings between 0 and 50 degrees mean that you don't feel favorably toward the person and that you don't care too much for that person. You would rate the person at the 50-degree mark if you don't feel particularly warm or cold toward the person.*

Thus, the feeling thermometer scale has a minimum of 0 (meaning a strong dislike) with a maximum rating of 100 (minimum the strong positive feeling).

I operationalize *political trust* as a function of four observed items: *Do What Is Right, Interest, Waste* and *Crooked.* Instead of modeling trust at the latent level—the approach I have taken in the previous chapters, I create a manifest measure of trust following the ANES recoding scheme[80]. The advantage of the ANES coding scheme for my analysis is that it produces a standardized measure of trust on a 0-100 scale.[81]

Because political trust itself is influenced by evaluations of the performance of the incumbent president at the time of the attitude construction, it is important to remove this component of trust from the analysis. Therefore, I regressed trust on a set of the dummy-coded variables representing presidents' tenures and used residuals in further analysis.[82]

On the individual level I use a set of the following social-demographic variables: sex [0–Woman; 1-Man], Race: White [0–Non-white; 1–White], Race: Black [0–Non-Black; 1–Black] age [6-point scale], education [4-point scale], Party ID: Democrats [0–Republican/Independent; 1–Democrat], Party ID: Independent [0–Republican/Democrat; 1-Independent]. Additionally, I control for the geographical region of respondents: [0–Non-South; 1–South].

I capture respondents' egocentric evaluations of the economy by including their perceptions about the change in the personal economic conditions over the next year.[83]

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[80] http://www.electionstudies.org/nesguide/toptable/tab5a_5.htm

[81] Although the latent factor score approach possesses numerous advantages over the ANES sum-ranking approach, I chose the latter since it allows me to include more time-points in my analysis. Since in this chapter I am using maximum likelihood rather than Bayes MCMC estimation method, it is important to maximize the number of the macro-level units.

[82] I created the dummy-coded variables capturing the following presidents' tenures: Nixon (1968-1972), Gerald Ford (1974-1976), Jimmy Carter (1978-1980), Ronald Reagan (1982-1988), George H.W. Bush (1990-1992), and Bill Clinton (1994-2000).

[83] I do not include respondents' sociotropic evaluations of the economy, since this would lead to the exclusion of six ANES waves from the analysis (1968-1980).

To capture the shifts in the issue salience over time I employ the national importance judgments on the micro- and macro levels. Public opinion literature suggests persuasive evidence that the national importance judgments *prime* the public to focus its evaluations of the government in particular domains (Edwards, Mitchell and Welch 1995; Hetherington and Rudolph 2008; Miller and Krosnick 2000).

I borrow the micro-level measures of the national importance judgments from the ANES pooled time-series dataset. These micro-level measures capture the individual-level concerns about certain issues within each point of time in my analysis. Respective variables are dummy-coded [0; 1], where 1 indicates that respondent is concerned about the issue and 0 if not.

I borrow the macro-level predictors measuring national importance judgments from Gallup's *Most Important Problem Survey*. The annualized proportion of responses on a particular topic across the period from 1947 to 2007 has been made available by the Policy Agendas' Project. These measures are operationalized as the annualized proportion of public expressing concerns about certain issue domains and represent collective shifts in perceived issue domain salience over time. The Policy Agendas Project describes the coding schema in details.[84]

Including the macro-level measure of the national importance judgments in addition to the corresponding micro-level variable is important for two reasons. First and foremost, they capture the change in the outcome variables at the different levels of analysis. Whereas the micro-level predictors capture the differences in the outcome variable based on the differences between individuals, the macro-level predictors capture the variation in the outcome based on the differences between the time-points.

[84] http://www.policyagendas.org/page/datasets-codebooks#gallups_most_important_problem

Second, the micro-level variables cannot explain the longitudinal variation in the effect of trust on the outcome variable. In order to account for this over-time variability in the effect of trust, inclusion of the macro-level variables in the model is required.

Studies of presidential popularity suggest that presidential approval is largely a function of nation's performance in economic and international/defense domains. I employ the variables capturing respective national importance judgments on both micro- and macro levels.[85] Additionally, Both ANES and Gallup record public concerns about another issue domain, which may affect public feelings towards the president—i.e., the government itself. I include public concerns about the government on both micro- and macro-levels of my analysis.

When answering the ANES president feeling thermometer question, respondents at different points of time receive different cognitive stimuli, as they actually think of different presidents. In order to control for this difference in the stimuli objects, I include a set of dummies representing tenures of six presidents: Richard Nixon (1968-1972), Gerald Ford (1974-1976), Jimmy Carter (1978-1980), Ronald Reagan (1982-1988), George H.W. Bush (1990-1992), and Bill Clinton (1994-2000). Since, the MIP question was not asked in the ANES after 2000, the 2000-2008 waves (G.W. Bush's tenure) are excluded from the analysis.

In order to test whether shifts in the issue salience moderate the effect of trust on the President feeling thermometer I include cross-level interaction effects between the macro-level indicators of the issue salience (national importance judgments) and the micro-level measure of political trust.

[85] ANES coding scheme does not differentiate between the international and defense issue domains, whereas the Policy Agendas Project's scheme counts both issues separately. Therefore, I include both international and defense issue domains on the macro-level

Model 2: Defense spending preferences. Bishop (2005) argues that the a dramatic surge in political trust following the September 11 terrorist attacks was a response to the increased public concern about the national defense. One might also expect that defense issues' priming should increase the effect of trust on the defense-related policies, particularly defense spending. Hetherington and Husser (2011) explore this possibility empirically using the ANES time-series data. They show that public concerns about the national defense indeed moderate the effect of trust on the defense-spending preferences following the September 11th attacks.

However, they employed an OLS design and kept the effect of trust fixed over time—an approach I raised concerns about earlier in this chapter. Hetherington and Husser (2011) assume that the year-specific regression lines representing the effect of trust on the defense spending scale have the same intercept and a slope. I build upon Hetherington and Husser's original research design, but relax the assumption that the intercepts and slopes of the effect of trust are the same.

My dependent variable is the 7-point *defense spending scale (VCF0843).* ANES has been administering this question since 1980.

> *"Some people believe that we should spend much less money for defense. Others feel that defense spending should be greatly increased. Where would you place yourself on this scale or haven't you thought much about this?"*

I reversed the scale so that 0 would represent "Greatly decrease defense spending" and 7—"Greatly increase defense spending."[86]

I use the same measure of political trust (not purged) and same individual-level predictors as above.

[86] I have further on rescaled all variables in the model to be on the scale from 0 and 1 to ease the comparison of the effects.

My theory suggests that the shifts in the international and defense domains' salience should exert the major effect on the respondents' defense spending preferences. I anticipate that when the defense issue domain is primed in public, the effect of political trust on the defense-spending preferences will be the largest. To capture this relationship, I include the measures of international/defense issue salience on both levels.[87]

I also provide an alternative measure of the defense issue salience in public by calculating the annual percentage of stories dedicated to the national defense domain in the NYT. As before, I referred to the Policy Agendas Project's archive, which has developed an extensive database sampled from the NYT Index.[88]

If my theory is correct, the shifts in the defense issues' importance should condition the effect of trust on the defense spending preferences. However, alternative explanations should also be considered. It is plausible that the economic downturns, among the rest, may alter the relationship between political trust and defense-spending preferences in public. When the economic issue domain becomes more salient (that is, when the national economy is in a downturn), the effect of trust on the defense spending preferences may decline, as people will become less concerned about the national defense and more concerned about the economy.[89] I test whether the shifts in the economic issues' salience may moderate the effect of political trust on the defense spending preferences by capturing the degree of public concerns about the state of the national economy on both micro- and macro levels.

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[87] Note that the ANES coding scheme does not distinguish between the foreign affairs- and the national defense issues, whereas the Policy Agendas' coding counts these two issues separately

[88] http://www.policyagendas.org/page/datasets-codebooks#new_york_times_index

[89] This of course implies that economic downturns and international crises do not occur at the same time

To test whether the shifts in the international/defense and economic issue salience moderate the effect of political trust on the defense spending preferences, I interact the macro-level indicators of the issue salience and the micro-level measure of political trust.

Model 3: Aid to Blacks and Minorities' Preferences. So far I have discussed how issue priming may affect feeling thermometer ratings towards the incumbent presidents and the attitudes to the defense spending. However, the effect of political trust is obviously not limited to these two domains. Hetherington and colleagues (Hetherington 2005; Hetherington and Husser 2011) show that the political trust shapes public support for a range of race-targeted programs, requiring material or/and ideological sacrifice. There is no reason to anticipate that the effect of trust on respective policy preferences would be stationary. On the contrary, cognitive priming theory suggests that as the salience of the welfare and civil rights domain increases, so should the effect of trust on the support of the race-targeted programs. On the contrary, as these issue domains become less important for the general public, the effect of trust on such programs should decline.

I explore this possibility empirically by referring to the ANES *Aid to Blacks* scale *(VCF0830)*. ANES has been administering respective question since 1970 using the fairly consistent wording:

> *"Some people feel that the government in Washington should make every effort to improve the social and economic position of blacks. Others feel that the government should not make any special effort to help blacks because they should help themselves. Where would you place yourself on this scale, or haven't you thought much about it?"*

I reversed the ANES original 7-point coding scale so that 0 would represent more conservative responses (Minority groups/blacks should help themselves) and 7 would stand for a more liberal standpoint (Government should help minority groups/blacks).

My measures of political trust and individual level control variables remain the same. This time however, I exclude respondents' personal economic perceptions from the analysis[90]. Additionally, I do not include African-American respondents in my model since their responses are likely based on group identity.

Previous research suggests that the effect of trust on respondents' position on the aid scale may be conditional on the civil rights and welfare issue domains' salience (Hetherington 2005; Hetherington and Husser 2011). I included the indicators capturing the importance of respective issues on both micro- and macro levels.

On the macro-level, the indicators of civil rights- and social welfare issue salience appeared to have a suppression effect on each other. Therefore, I retained the coefficient exerting a stronger relationship on the dependent variable (civil rights) but excluded the measure of the social welfare issue salience. However, I was able to compensate for the excluded indicator by calculating the annual percentage of the stories dedicated to the welfare topic in the NYT. The latter variable is essentially a proxy of the excluded Gallup measure, since both variables correlate strongly ($r = 0.73$; $p < .001$).[91]

[90] My decision to remove this variable is statistical rather than substantial, as it substantially worsens model's fit.

[91] Percentage of stories falling within this domain is usually very low. This presents two problems. First, the measure might not itself be a valid indicator of the issue domain salience. Second, insufficient variation in the NYT welfare issue domain coverage over time might present a modeling problem. To address both issues I calculated percentage of change in the NYT issue attention, rather than percentage of stories dedicated to the issue—the approach I was taking before. The chosen approach better captures the shifts in the issue importance over time and increases the variation of the variable

Literature also suggests that the effect of trust on the race-targeted programs may decline when public concerns shift to the other issue domains, particularly to the economy and international/defense issues. To account for the effect of these shifts, I included respective national importance judgments on both levels.

To test whether shifts in the issue salience moderate the effect of trust on respondents' position on the *Aid to Blacks and Minorities* scale I interact the macro-level indicators of the issue salience and micro-level measure of political trust.

Models

To test whether the effect of political trust on respondents' political attitudes and policy preferences is conditioned by the change in the issue salience of the respective issue domains *(H6)*, I employ the multilevel regression approach with random coefficients (Beck and Katz 2007). The moderation effect of the change in the issue salience on the slope of the effect political trust exerts on the outcome variables is captured by interacting issue salience and trust. Interpretation of the cross-level interaction effects, if statistically significant, would entail that the predictive effect of political trust on political attitudes and policy preferences varies over time and depends on the degree to of issue priming in public.

To facilitate comparison of the effects in the model, the variables have been rescaled to be in the range from zero to one.[92] In order to provide a more intuitive interpretation of the intercept and slope parameters in the model I centered the macro-level predictors at their grand means. The detailed coding of the variables is presented in the Appendix K.

[92] The macro-level variables remain in their original percentage-point scale

In order to test whether the random effects are required in the model (that is, whether the effect of trust varies over time), I performed the Breusch-Pagan Lagrange multiplier test comparing the fit of the models with the fixed- and random effects. The null hypothesis states that there is no difference in the effect of a dependent variable (trust) on the outcome variables over time. The alternative hypothesis implies a significant temporal variation in the effects. In all three models the null hypothesis has been rejected at $p < .001$. Therefore, fixed effects models are rejected in favor of random–coefficients design, in which the effect of trust on the outcome variables is modeled as random.

Following the accustomed multilevel modeling practice, I fit the models in several consecutive steps. I begin by modeling trust as a sole predictor of each outcome variable. Next, I introduce the micro-level variables, i.e. the social-demographic controls and the national important judgments. Then, I add the macro-level measures of the issue salience at each point of time. Finally, I add the cross-level interaction effects between the issue salience and trust. I examine the change in the fit of the models after every step. All models are fitted in Stata 12 using the maximum likelihood estimator.[93]

Since the number of 2nd level units in my models is on a lower limit of the maximum likelihood estimation, I re-estimated the models in MLwiN using MCMC estimator using starting values obtained using the Restricted Iterative Generalized Least Squares (RIGLS) algorithm. I did not find substantial differences in the results between two estimation methods.[94]

[93] Stata offers several options to fit the random coefficients' models with continuous outcomes; such as *xtmixed* and *gllamm* (see Rabe-Hesketh and Skrondal 2008 for review) I used the more computationally efficient *xtmixed* command.

[94] I preferred Stata to MLwiN due to the more comprehensive graphing capabilities of the former

Results

In this section I present the results of the three tested models. The logic of my presentation will be as follows. As the multilevel modeling literature suggests, I begin models' assessment by reviewing their statistical fit. First, I turn to the random effects part and examine the change in the variation in the random slopes and intercepts of the effect trust exerts on the outcome variables over time. If the models fit the data well, the variability in the random effects will be decreasing once the macro-level variables are introduced in the models. Next, I assess the change in the intra-class correlation (ICC). The ICC, which captures the temporal variation in the dependent variable, should also decline once the relevant macro-level predictors are added into the model. Then I proceed with substantial interpretation of the results paying a special attention to the assessment of the cross-level interaction effects.

Model 1: President feeling thermometer. I begin by assessing statistical fit of the model (see table 10.1). As the Breusch-Pagan Lagrange multiplier test suggested, there is indeed a significant variation in the slopes and intercepts of the effect political trust exerts on the president feeling thermometer.[95] This indicates that the effect of trust on the feeling thermometer ratings is not uniform over time. How well do the context-level predictors explain the cross-time variation in the effect of trust? Since the (logged) coefficients of both parameters gradually decrease as the models begin to accommodate more predictors, fitted models indeed minimize the variability in the effects of trust on the feeling thermometer reasonably well. Expectedly, the macro-level

[95] Whereas it is theoretically possible that the effect of the presidents tenure on the feeling thermometer ratings might also vary over time, Breusch-Pagan Lagrange multiplier test does not provide statistical support for this assumption.

variables (Model 4) and the cross-level interaction effects (Model 5) explain the largest chunk of cross-time variance in the random effects. This of course is not surprising. The cross-time variation in the random effects of trust on the feeling thermometer would naturally be explained by taking into consideration the possible sources of this cross-time variation—national importance judgments.

The ICC—the measure of the cross-time variation in the dependent variable—also demonstrates substantial decline from about 0.098 (Model 1) to 0.016 (Model 5).[96] This suggests that including macro-level variables and cross-level interactions in the models produces substantial reduction in the variability of feeling thermometer ratings over time, removing about 80% of the original longitudinal variation in the thermometer ratings. Note however, that most variation is explained by accounting for the national importance judgments on the macro level, whereas the dummy-coded control variables representing presidents' tenures explain less than 1% of the ICC in the model.[97] This indicates that the primary source for the cross-time variability in the feeling thermometers scores in my analysis is not presidents' personalities—though it would obviously be very naïve to completely discard their importance of this factor—but the change in the national importance judgments at the time of attitude construction.

Finally, the AIC and BIC goodness-of-fit criteria provide additional evidence that the fit of the model improves as they become more complex.[98]

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[96] A slight increase in the ICC in the Model 2 compare to Model 1 indicates that adding individual-level controls increases the temporal variation in the responses to the feeling thermometer

[97] I fitted the macro-level national important judgments and presidents' tenure dummies separately and assessed the change in the ICC

[98] Both AIC and BIC increase slightly in the last model penalizing for its complexity. However, according to Raftery (1995) the difference between the information criteria in model 4 and 5 is not significant

The main effect of trust on the feeling thermometer is positive and significant across all five models, which is consistent with the theory. This suggests that respondents with a higher level of trust tend to have warmer feelings towards an incumbent president, controlling for all other effects in the model. Since the macro-level predictors have been centered at the grand means, this parameter now indicates the effect of trust on the feeling thermometer when all context-level predictors are in their grand means (that is when people have an "average" concern about the economy, defense and international affairs, and government functions).

On the micro-level citizens' concerns about the state of the national economy and international affairs do not significantly affect feeling thermometer scores. However, respondents concerned about the government functions have significantly lower feeling thermometer ratings.

On the macro-level, the main effects of the national importance judgments on the feeling thermometers represent the intercepts of the higher-order cross-level interaction terms (MIP*Trust). Therefore, they can only be interpreted in conjunction with the cross-level effects.[99] Because I grand-mean centered the macro-level predictors, these intercepts will indicate the effect of the national importance judgments on trust, when the issue has an average level of salience for the public and when political trust will be at a zero level (since political trust was not centered).

Of course, the major question is whether the tested models support the hypothesis that shifts in the issue domain salience moderate the effect of trust on the

[99] Since these variables are grand-mean centered, the main effects represent the effect national importance judgments exert on trust when public concern about each issue is at its grand mean. Therefore, interpreting the main effects without considering the interaction terms is not meaningful. One needs to consider the effect of the cross-level interaction terms in order to fully understand the relationship between the shift in the issue salience and the change in the effect of political trust on the outcome variable.

feeling thermometer ratings. Cross-level interaction effects provide the answer (Model 5). The interaction between the MIP economy on the macro level and trust on the micro level appears statistically significant ($b = -0.116$; $p < 0.10$). This shows that when people become primed to evaluate the government trustworthiness with economic considerations in mind, the effect of trust on the presidential feeling thermometer becomes smaller. Put simpler, when the economy is sour, trust becomes a less important ingredient of people's feelings towards the incumbent presidents.

Since the interaction effect between trust and economic sentiments is significant, this decline in the effect of trust is explained by the fact that respondents were primed to evaluate the trustworthiness of the government—personified by the incumbent—with economic considerations in mind.

Plotting the interaction effect may further illustrate the relationship between the economic issue salience and trust across a range of values. Fig. 10.1 plots the change in the marginal effect of trust (the solid sloping line) with the increase in the economic issue salience, while the effect of all other predictors is kept at the mean. The 95% confidence intervals around the line determine the conditions under which trust has a statistically significant effect on the presidential feeling thermometer. This effect appears significant when the upper and lower bounds of the confidence interval are both above (or below) the zero line.

As fig. 10.1 demonstrates, increase in the level of public concerns about the state of the national economy consistently—that is from 1968 to 2000—makes trust a less important ingredient of the presidential feeling thermometer ratings. Notwithstanding this decline, the effect of trust on the feeling thermometer does remain statistically

significant throughout the entire range of values of the economic issue salience measure.

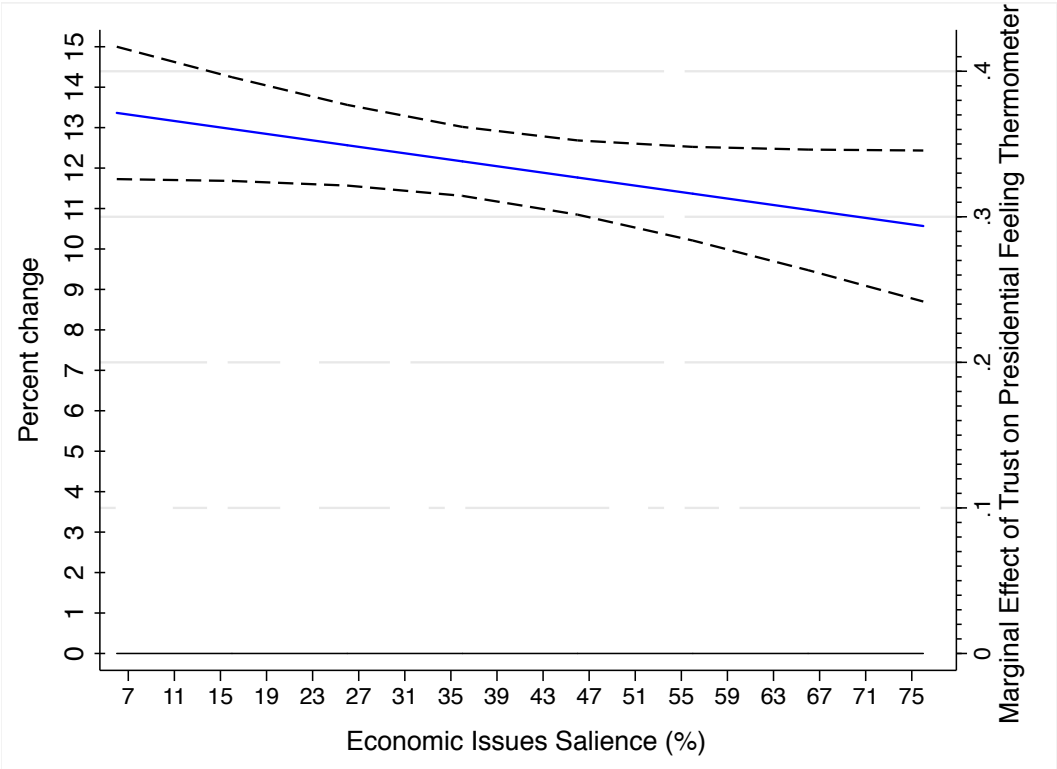

Figure 10.1. Change in the effect of trust on the presidential feeling thermometer conditional on the economic issue salience

The interaction effect between the national defense judgments and trust does not reach the threshold of statistical significance although it is in the expected direction. However an important remark must be made here. If the Nixon (1968-1972) and Ford's tenures (1974-1976) were excluded from the analysis, the interaction term would turn significant at $p < 0.05$ for the period of over two decades (1978-2000). This effect would also be fairly strong: one percentage-point increase in public concern about the national defense would increase the effect of trust on the feeling thermometer ratings by 0.421

unit-points. This provides some preliminary evidence that priming of the national defense issue domain does moderate an effect of trust on the feeling thermometer, at least during certain periods of time.

Although obtained results are consistent with my hypothesis (*H6*), it is possible that the observed pattern is idiosyncratic only to the feeling thermometer ratings and may not be reproduced elsewhere. Therefore, I turn to the next model to test whether the shifts in the issue salience moderate the effect of trust on respondents' defense spending preferences.

Table 10.1: The Effect of Political Trust on the President Feeling Thermometer: 1968-2000

Dependent variable: **President feeling thermometer**	**Model 1**	**Model 2**	**Model 3**	**Model 4**	**Model 5**
Trust	0.339***	0.328***	0.313***	0.319***	0.338***
	(0.018)	(0.019)	(0.016)	(0.015)	(0.017)
Race: Black		-0.045***	-0.033***	-0.037***	-0.036***
		(0.007)	(0.009)	(0.009)	(0.009)
Race: White		-0.002	-0.009	-0.006	-0.006
		(0.006)	(0.007)	(0.007)	(0.007)
Sex: Man		-0.009**	-0.008*	-0.008*	-0.008*
		(0.003)	(0.004)	(0.004)	(0.004)
Age		0.065***	0.056***	0.057***	0.057***
		(0.005)	(0.006)	(0.006)	(0.006)
Education		-0.045***	-0.041***	-0.042***	-0.042***
		(0.006)	(0.004)	(0.006)	(0.006)
Party ID: Democrat		-0.039***	-0.048***	-0.063***	-0.063***
		(0.004)	(0.004)	(0.004)	(0.004)
Party ID: Independent		-0.028***	-0.036***	-0.044***	-0.044***
		(0.005)	(0.006)	(0.006)	(0.006)
Region: South		0.024***	0.016***	0.019***	0.020***
		(0.003)	(0.004)	(0.004)	(0.004)
Personal economic evaluations		-0.079***	-0.075***	-0.076***	-0.076***
		(0.005)	(0.006)	(0.006)	(0.006)
MIP economy (ANES micro-level)			0.004	0.003	0.003
			(0.007)	(0.005)	(0.005)
MIP international (ANES micro-level)			-0.002	0.001	0.001
			(0.006)	(0.006)	(0.006)
MIP Government (ANES micro-level)			-0.068***	-0.059***	-0.059***
			(0.010)	(0.010)	(0.010)
Nixon				0.067	0.043
				(0.068)	(0.063)
Ford				0.080	0.082
				(0.054)	(0.051)
Carter				0.099*	0.091*
				(0.046)	(0.043)
Reagan				0.106+	0.100+
				(0.057)	(0.053)

G.H.W. Bush				0.056	0.045
				(0.037)	(0.035)
Clinton (reference)				0.000	0.000
				(0.000)	(0.000)
MIP Government functions (Gallup macro-level)				0.323	0.269
				(0.621)	(0.587)
MIP Economy (Gallup macro-level)				-0.109	-0.094
				(0.085)	(0.081)
MIP International (Gallup macro-level)				0.078	0.095
				(0.371)	(0.363)
MIP Defense (Gallup macro-level)				-0.232	-0.214
				(0.200)	(0.190)
MIP Government (Gallup)*Trust					0.004
					(0.345)
MIP Economy (Gallup)*Trust					-0.116^{+}
					(0.066)
MIP International (Gallup)*Trust					0.328
					(0.439)
MIP Defense (Gallup)*Trust					0.144
					(0.123)
Constant	0.477***	0.527***	0.557***	0.491***	0.499***
	(0.014)	(0.017)	(0.014)	(0.040)	(0.038)
Random effects					
Logged S.D. of the random slopes	-2.620***	-2.602***	-3.020***	-3.132***	-3.661***
	(0.199)	(0.203)	(0.277)	(0.311)	(0.578)
Logged S.D. of the random intercepts	-2.810***	-2.770***	-3.287***	-3.610***	-3.657***
	(0.165)	(0.170)	(0.198)	(0.220)	(0.215)
Logged S.D. of the residual errors	-1.306***	-1.319***	-1.340***	-1.348***	-1.348***
	(0.004)	(0.004)	(0.005)	(0.005)	(0.005)
Model statistics					
Intra-class correlation	0.108	0.116	0.052	0.038	0.019
Log-likelihood	-3801.7	-2818.1	-1669.3	-1446.7	-1443.6
Wald Chi^2	356.9***	961.7***	930.9***	1109.2***	1426.1***
Likelihood-ratio test vs. linear regression	1712.2***	1385.5***	363.9***	152.9***	146.6***
AIC	7613.4	5664.2	3372.6	2945.4	2947.3
BIC	7655.5	5779.4	3507.4	3150.8	3184.2
Observations	33.196	27.609	20.607	19.902	19.902
Number of groups (time-points)	20	20	17	17	17

Standard errors in parentheses
Source: ANES cumulative time-series dataset
$^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < .01$, *** $p < .001$

Model 2: Defense-spending preferences. As above, I begin by turning to the assessment of random effects and model statistics (table 10.2). The random effects follow the expectable pattern indicating a substantial cross-time variation in slopes and intercepts of the effect of trust on the defense spending preferences. Including the macro-level predictors and cross-level interaction effects again explains a substantial part of this temporal variability. From a substantive standpoint this implies that controlling for the shifts in national importance judgments over time, I can minimize

the cross-time differences in the effect of trust on the defense-spending preferences. So far, this provides an indirect support to the offered hypothesis (*H6*).

A look at the ICC coefficients' change tells how much of the cross-time variability in the dependent variable is removed by the macro-level predictors. The ICC demonstrates a substantial decline from 0.128 (Model 1) to 0.43 (Model 5). Thus, accounting for the shifts in the issue salience and interaction effects between the issue salience and trust explains over 60% of the temporal variation in respondents' defense spending preferences.

Of course, my primary interest lies in the cross-level interaction effects. The interaction between MIP defense and political trust turns out to be significant, and the effect is in the expected direction. As the proportion of the general public concerned about the national defense increases the effect of trust on the defense-spending preferences' scale goes up (government should spend more). One point increase in the national defense concerns leads to the 0.352-point increase in the effect of trust on respondents' defense spending preferences.

Plotting the interaction effect provides a better insight into the change in the effect of political trust across the entire range of values in the national defense concerns in the mass public (fig. 10.2).

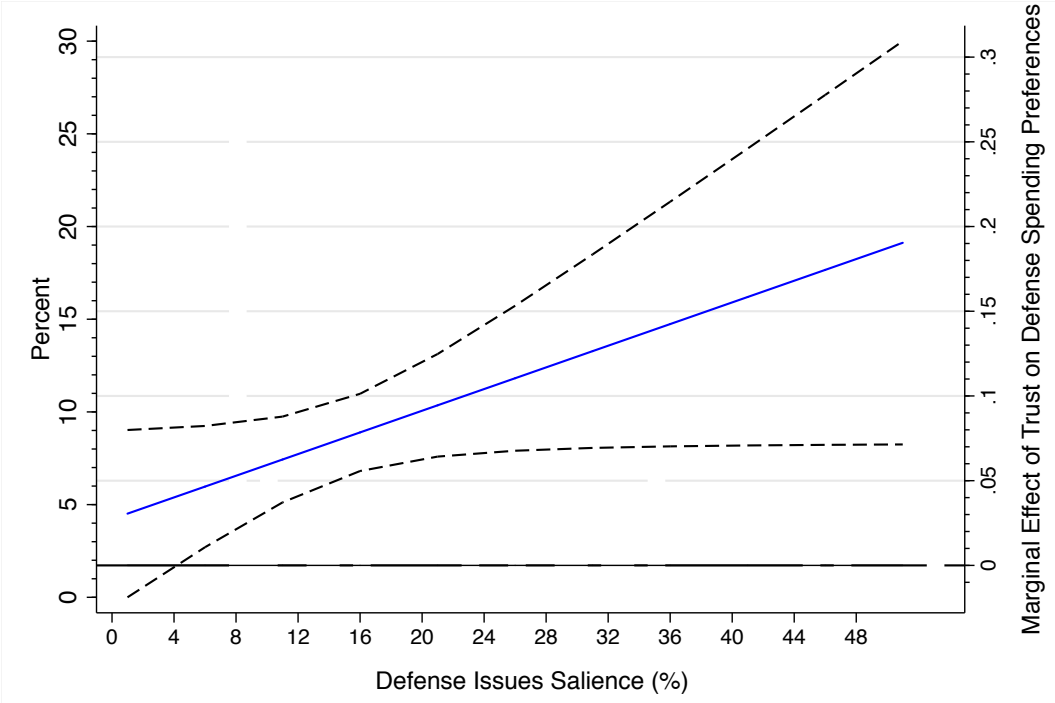

Figure 10.2. Change in the effect of trust on government defense spending preferences conditional on the defense issues' salience

As fig. 10.2 shows, when national defense issues' do not resonate with the mass public, the effect of trust on the defense-spending preferences is small and not statistically significant. If less than 2 percent of the mass public is concerned about the national defense issues, political trust—as predicted by the model—will fail to exert a statistically significant effect on public defense-spending preferences (at $p < .05$ level).[100] Again, this conclusion holds if the effects of all other variables in the models remain at their mean levels.

[100] However small this number may seem, in 1974-1976, 1992-1998 as well as in 2008 less than 2% of respondents was concerned about national defense issues (www.policyagendas.org).

It is easy to see that as the defense issue salience increases, so does the effect of trust on defense-spending preferences. The magnitude of this change in the effect is substantial. When defense salience scale changes from its minimum (the issue is not salient at all) to maximum (the issue is very salient) the effect of trust on the defense spending preferences increases by 15 percentage points. Again, these findings corroborate the offered hypothesis: the effect of political trust on the defense spending preferences is conditioned by the temporal shifts in the issue domain salience.

Table 10.2: The Effect of Political Trust on the Defense Spending Preferences: 1980-2000

Dependent variable: Defense Spending Scale	**Model 1**	**Model 2**	**Model 3**	**Model 4**	**Model 5**
Trust	0.096***	0.089***	0.062***	0.074***	0.105***
	(0.014)	(0.012)	(0.017)	(0.013)	(0.017)
Race: Black		0.024**	0.007	0.001	0.001
		(0.008)	(0.009)	(0.009)	(0.009)
Race: White		-0.015*	-0.025***	-0.028***	-0.028***
		(0.006)	(0.007)	(0.007)	(0.007)
Sex: Man		-0.025***	-0.025***	-0.026***	-0.025***
		(0.004)	(0.004)	(0.004)	(0.004)
Age		0.025***	0.031***	0.032***	0.031***
		(0.006)	(0.007)	(0.007)	(0.007)
Education		-0.169***	-0.166***	-0.166***	-0.166***
		(0.006)	(0.007)	(0.007)	(0.007)
Party ID: Democrat		-0.055***	-0.062***	-0.066***	-0.066***
		(0.004)	(0.005)	(0.005)	(0.005)
Party ID: Independent		-0.002	-0.015*	-0.016*	-0.015*
		(0.006)	(0.007)	(0.007)	(0.007)
Region: South		0.046***	0.060***	0.063***	0.063***
		(0.004)	(0.004)	(0.004)	(0.004)
National economy evaluations		-0.034***	-0.032***	-0.029***	-0.029***
		(0.006)	(0.006)	(0.006)	(0.006)
Personal economy evaluations		-0.001	-0.004	-0.004	-0.004
		(0.006)	(0.007)	(0.007)	(0.007)
MIP economy (ANES micro-level)			-0.015**	-0.015**	-0.015**
			(0.005)	(0.005)	(0.005)
MIP international (ANES micro-level)			0.006	0.006	0.006
			(0.006)	(0.006)	(0.006)
NYT defense issues' coverage (Gallup macro-level)				-0.025	-0.072
				(0.145)	(0.123)
MIP defense (Gallup macro-level)				-0.168	-0.282
				(0.275)	(0.232)
NYT defense*Trust					0.006
					(0.089)
MIP defense (Gallup)*Trust					0.352+
					(0.153)
MIP economy (Gallup)*Trust					-0.095
					(0.065)
Constant	0.445***	0.576***	0.598***	0.605***	0.581***

	(0.027)	(0.029)	(0.025)	(0.030)	(0.027)
Random effects					
Logged S.D. of the random slopes	-3.307***	-3.474***	-3.156***	-3.610***	-4.363***
	(0.328)	(0.384)	(0.352)	(0.477)	(1.208)
Logged S.D. of the random intercepts	-2.374***	-2.380***	-2.642***	-2.885***	-3.078***
	(0.206)	(0.206)	(0.230)	(0.242)	(0.242)
Logged S.D. of the residual errors	-1.342***	-1.393***	-1.470***	-1.501***	-1.501***
	(0.005)	(0.005)	(0.006)	(0.006)	(0.006)
Model statistics					
Intra-class correlation	0.128	0.133	0.115	0.071	0.043
Log-likelihood	-1565.4	-504.1	625.4	973.2	977.7
Wald Chi^2	49.5***	1351.7***	1183.6***	1268.3***	1303.5***
Likelihood-ratio test vs. linear regression	2408.3***	2231.2***	816.5***	551.7***	418.3***
AIC	3140.8	1038.2	-1216.9	-1908.5	-1909.4
BIC	3180.3	1155.5	-1089.9	-1767.7	-1738.9
Observations	19.909	18.332	12.898	12.192	12.192
Number of groups (time-points)	16	16	12	12	12

Standard errors in parentheses
Source: ANES cumulative time-series dataset
$^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < .01$, *** $p < .001$

Model 3: Aid to blacks and minorities' preferences. As above, I follow established logic in assessing the model by first referring to the random coefficients and model statistics' sections (table 10.3). As expected, there is substantial cross-time variation in the effect of trust on respondents' preferences concerning aid to blacks and minorities. As above, the variability of this effect does diminish once the models begin to accommodate macro-level predictors and cross-level interaction effects. This implies that controlling for the shifts in the national importance judgments explains a large portion of the variability in the effect of trust.

The ICC similarly declines from 0.073 (Model 1) to 0.013 (Model 5). Thus, the model with the macro-level predictors and the cross-level effects accounts for over 80% in the variation in responses to the aid-to-minorities' scale over time. The AIC and BIC criteria likewise suggest that the model with cross-level interactions (model 5) has the best fit to the data.

On the micro-level, respondents concerned about civil rights and welfare expectedly demonstrate higher endorsement for the government aid to blacks and

minorities. The effects of the national importance judgments on the macro-level—which are the intercepts of the cross-level interaction effects when the trust is zero—should be interpreted by taking into consideration the higher order effects; that is the cross-level interaction terms. Although the main effect of the civil rights judgments on the macro-level is negative, it does not entail the actual negative relationship between civil rights concerns and public support for the aid to blacks and minorities.[101]

The positive sign of the interaction entails that when the salience of the civil rights issues goes up, the effect of trust on the support for the minority aid program expectedly increases. One unit (percentage-point) increase in the proportion of those concerned about civil rights in the country increases the effect of trust on the aid to blacks and minorities' scale by 0.524 units ($p < 0.05$). Fig. 10.3 further plots the pattern of interaction between the civil rights' issue's salience and political trust.

[101] It implies that when the volume of media attention to the civil rights is at the mean, the effect of civil rights concerns on the redistribution preferences of respondents with a zero level of trust is actually negative (government should be spending less) but is not significant ($b = -0.145$; $p = .221$).

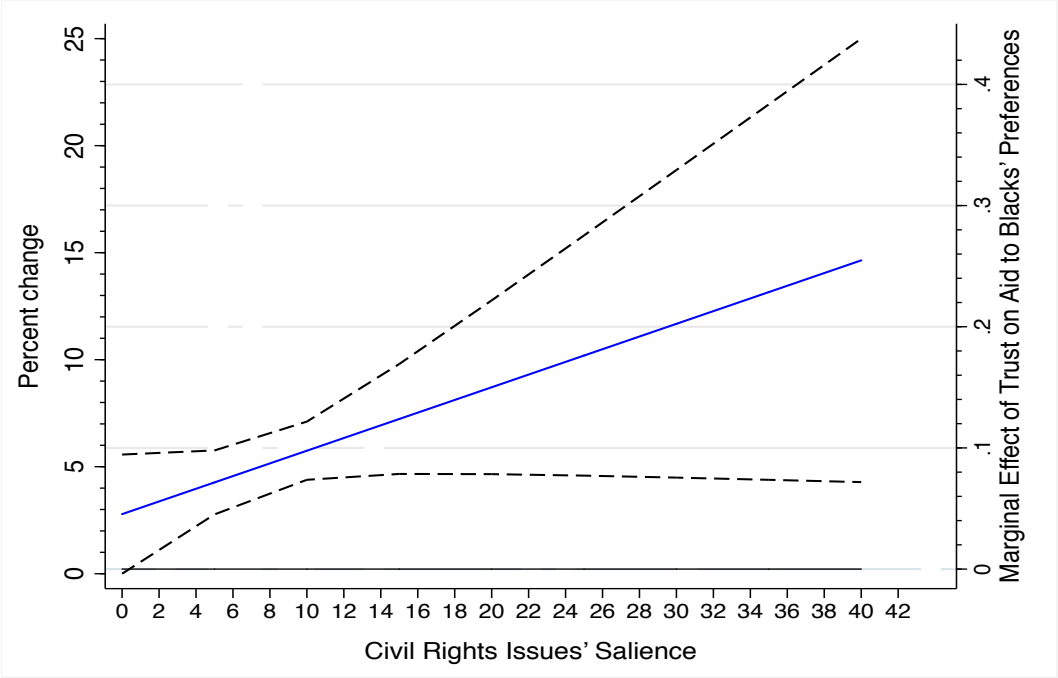

Figure 10.3. Change in the effect of trust on the aid to blacks and minorities' preferences conditional on the civil rights' issue salience

Again, the figure makes it clear that when civil rights issues are not primed in the mass public, the effect trust on the race-related redistribution preferences is not significant. The model predicts that if less than one percent of the mass public were concerned about the civil rights issues, trust would fail to exert any effect on the dependent variable. While this might sound like a virtually implausible scenario, in the recent decades civil rights issues did not resonate with the public strongly. In 1988—according to Gallup—zero percent of respondents reported problem as important, and since 2002, civil rights' issues did not concern more than 1.5 percent of Americans.

When civil rights issues become more salient, the effect of trust on the aid to blacks preferences also increases. Translating this effect to the more intuitive percentage-point scale one can infer that change in the civil rights issues' salience from the least- to the utmost importance leads to the 11% change in the effect of trust.

When other issues climb up on the public agenda, the effect of trust on the race-targeted programs expectedly declines.[102] One unit increase in the proportion of citizens concerned about defense issues diminishes the effect of trust on the race-related redistribution policies by 0.442 ($p < 0.01$). Again, this occurs due to the fact that people begin weighting economic rather than civil rights issues more heavily when evaluating the government.

Fig. 10.4 demonstrates how increase in the defense issues' saliences diminishes the effect of trust on the race-related redistribution preferences by priming respondents to think about the government in terms of national defense rather than civil rights' issues.

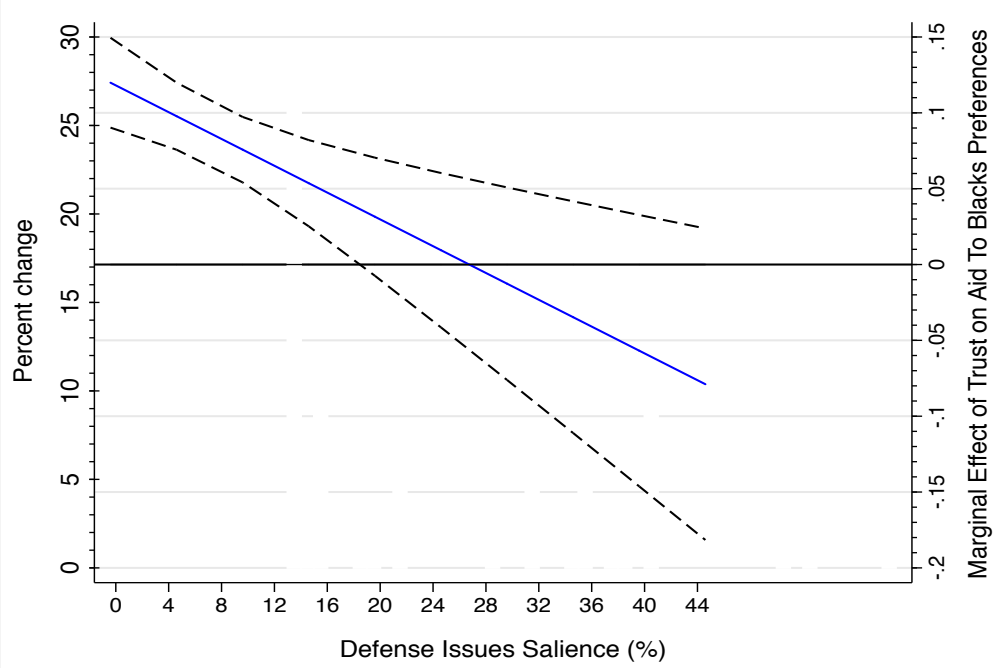

Figure 10.4. Change in the effect of trust on the aid to blacks and minorities' preferences conditional on the defense issue salience

[102] The situation in which increase in the salience of defense issues increases right after the increase in the civil rights' issues is of course hypothetical, although it is entirely plausible.

The figure illustrates how change in the defense issue salience conditions the effect of trust on respondents' preferences concerning aid to blacks. The model predicts that when more than 18 percent of the mass public becomes concerned about the national defense issues, trust stops exerting significant effects on respondents' race-related redistribution preferences. This again implies that the effects of all other variables in the model are kept at their mean level.

Again, these findings corroborate the hypothesis that the impact trust has on the policy preferences depends on what parts of government people are primed to think about. When civil rights' issues become more salient, people are primed to evaluate trustworthiness of the national government with respective considerations in mind. This, in turn, causes the increase in the effect of trust on the preferences in the civil rights domain. When other issues climb up on the public agendas, the effect of trust on the race-related redistribution preferences declines.

Table 10. 3: The Effect of Political Trust on Aid to Minorities Preferences: 1970-2000

Dependent variable: Aid to Minorities	**Model 1**	**Model 2**	**Model 3**	**Model 4**	**Model 5**
Trust	0.080***	0.075***	0.083***	0.084***	0.072***
	(0.020)	(0.016)	(0.015)	(0.015)	(0.012)
Race: White		-0.192***	-0.184***	-0.189***	-0.188***
		(0.005)	(0.006)	(0.006)	(0.006)
Sex: Man		-0.029***	-0.029***	-0.029***	-0.029***
		(0.004)	(0.004)	(0.004)	(0.004)
Age		-0.022***	-0.018**	-0.018**	-0.018**
		(0.006)	(0.006)	(0.006)	(0.006)
Education		0.102***	0.110***	0.110***	0.110***
		(0.006)	(0.007)	(0.007)	(0.007)
Party ID: Democrat		0.101***	0.104***	0.104***	0.103***
		(0.004)	(0.004)	(0.004)	(0.004)
Party ID: independent		0.045***	0.046***	0.045***	0.045***
		(0.006)	(0.007)	(0.007)	(0.007)
Region South		-0.053***	-0.056***	-0.056***	-0.056***
		(0.004)	(0.004)	(0.004)	(0.004)
MIP Economy (ANES micro-level)			-0.006	-0.003	0.039
			(0.005)	(0.005)	(0.005)
MIP International (ANES micro-level)			0.119	0.119	0.119
			(0.277)	(0.277)	(0.277)
MIP Civil Rights' issues (ANES micro-level)			0.048**	0.049**	0.048**

			(0.017)	(0.017)	(0.017)
MIP Social welfare (ANES micro-level)			0.019***	0.020***	0.020***
			(0.005)	(0.005)	(0.005)
MIP Economy (Gallup macro-level)				0.048	0.042
				(0.063)	(0.066)
MIP International (Gallup macro-level)				0.100	0.134
				(0.283)	(0.278)
MIP Defense (Gallup macro-level)				0.316**	0.386***
				(0.098)	(0.103)
MIP Civil Rights' issues (Gallup macro-level)				-0.0725	-0.145
				(0.212)	(0.221)
NYT welfare stories' coverage				1.375	0.984
				(2.151)	(2.239)
MIP Economy (Gallup)*Trust					0.075
					(0.091)
MIP Civil Rights (Gallup)*Trust					0.524+
					(0.029)
MIP Defense (Gallup)*Trust					-0.442**
					(0.138)
NYT Welfare stories' coverage*Trust					2.106
					(3.111)
Constant	0.396***	0.479***	0.466***	0.489***	0.492***
	(0.010)	(0.012)	(0.014)	(0.014)	(0.014)
Random effects					
Logged S.D. of the random slopes	-2.583***	-2.859***	-3.103***	-3.063***	-3.946***
	(0.213)	(0.235)	(0.301)	(0.299)	(0.815)
Logged S.D. of the random intercepts	-3.253***	-3.208***	-3.193***	-3.659***	-3.647***
	(0.191)	(0.182)	(0.198)	(0.237)	(0.218)
Logged S.D. of the random errors	-1.199***	-1.258***	-1.269***	-1.269***	-1.269***
	(0.004)	(0.004)	(0.005)	(0.005)	(0.005)
Model statistics					
Intra-class correlation	0.073	0.057	0.045	0.035	0.013
Log-likelihood	-5907.5	-4250.8	-3019.0	-2964.4	-2958.9
Wald Chi^2	16.2***	3271.7***	2506.5***	2526.0***	2588.9***
Likelihood-ratio test vs. linear regression	243.9***	472.6***	278.3***	121.1***	99.8***
AIC	11825.0	8525.6	6068.0	5968.9	5965.8
BIC	11866.0	8623.7	6186.5	6126.4	6154.9
Observations	26.641	26.165	19.948	19.565	19.565
Number of groups (time-points)	18	18	16	16	16

Standard errors in parentheses
Source: ANES cumulative time-series dataset
+ $p < 0.10$, * $p < 0.05$, ** $p < .01$, *** $p < .001$

Discussion

The findings of this chapter shed light on the cross-time variation in the effect of respondents' political trust on their attitudes and policy preferences. Using three different examples, I show that the effect political trust has on respondents' feeling thermometer ratings, and support for the defense-spending and race-related redistribution policies is not consistent over time. The effect of trust—as my analyses

show—is high in the policy domains, salient for the public at the moment of the attitude construction.

According to the cognitive priming theory, change in the issue domain salience primes respondents to think about the government with these issues in mind. My findings corroborate this theory and further our understanding of the relationship between the shifts in the issue salience and changing effects of trust on the attitudes and policy preferences attached to the primed issue domain.

First, by letting the slope of the effect of trust to vary over time, I show that there is a significant temporal variation in the strength of the effect trust exerts on respondents' political attitudes and policy preferences in my model. This indicates that the effect of trust in not unconditional. Depending on the circumstances, trust exerts stronger and weaker effects on the same outcome variables at different points of time.

Next, in order to explore contingency in the effects of trust, I interact it with the macro-level measures of issue salience in the mass public. I find statistically significant interaction effects between trust and issue salience in all three domains in question, i.e. presidential feeling thermometer ratings, defense- and race-related spending preferences. This provides strong evidence that increase in the issue salience moderates the effect of trust on political attitudes and policy preferences attached to the primed domain.

The effect of trust on public feelings about incumbent presidents is contingent on the considerations people have in mind when they think about the government. As the salience of economic matters increases and people begin to place more weight on economic issues to evaluate government trustworthiness, the effect of trust on the presidential feeling thermometer ratings declines. In other words, trust becomes a less

important ingredient of presidential evaluations when economic conditions are sour. Controlling for the change in the economic issue salience over time, the model substantially explains the variability in presidential feeling thermometer ratings over the period of more than three decades (1968-2000).

Consistent with my hypothesis, the effect of trust on respondents' defense spending preferences is conditional on the national defense issues' salience in public. This is confirmed by the significant interaction between the two variables. The positive sign of the interaction effect suggests that when salience of defense issues increases, the slope of the effect trust exerts on the government support for the defense spending becomes much steeper. Put otherwise, the weight of political trust in people's decision to support the defense spending initiative increases when people become more concerned about the national defense. On the contrary, if national defense issues are not salient among the mass public, trust will fail to produce a significant effect on respondents' defense-spending preferences. Again, accounting for the change in the context-level effects allows me to largely explain the variability in people's defense-spending preferences over two decades (1980-2000).

The positive interaction sign between the civil rights issues' salience and political trust again suggests that when civil-rights and racial issues are primed in the mass public, the effect of trust on attitudes about the race-targeted redistribution programs substantially increases. On the contrary, when civil rights issues are not salient, trust fails to exert a statistically significant effect on respondents' preferences concerning aid to blacks and minorities. When other issues become more salient and the civil rights and racial issues disappear from the public agenda, the effect of trust on respondents' race-targeted redistribution preferences declines. In other words, the

effect of trust on public preferences in this domain diminishes as other issues climb up on the public agendas. The pattern of these findings is remarkably consistent for about three decades (1970-2000).

More broadly, my analysis implies that the temporal effect of trust on a wide array of political attitudes and policy preferences is dynamic. The magnitude of this effect is contingent on the issue salience of the respective policy domains. When the issues become salient, people are primed to evaluate the government trustworthiness with primed considerations in mind. This, in turn, causes trust to exert stronger effect on the attitudes and preferences in the primed domains. The fact that the effect of the issue priming is contingent on the change in the issue domain salience thus explains why trust ceases to explain respondents preferences in one policy domain and begins to affect their preferences in another area (see e.g. Hetherington 2005).

I agree with Hetherington (2005; see also Hetherington and Husser 2011) that because political trust tends to be higher when international issues are more salient in public, trust may provide a more solid support for the defense and foreign policy initiatives of the government. On the other hand, since trust is usually a scarce commodity when economic and civil rights are high on the public agendas, one would expect the extent of its effect on government policies in these areas to be much weaker.

On a more abstract level, my results further corroborate the hypothesis that public trust is not based on a single and most general evaluation of the entire government (see Hetherington and Husser 2011 for a cogent idea). Instead, people trust certain parts of the government more than others. People's judgments about the trustworthiness of the government largely depend on what parts of the government people are primed to think about. When the national defense issues become salient,

people begin to think primarily about the "parts of the government"—the term I borrow from Hetherington and Husser (2011)—that provide defense and security. Respectively, trust begins to exert a stronger support for the defense- and international policies of the government. When civil rights and race issues are primed in the mass public, people are more concerned about the parts of the government responsible for redistribution of the public resources to minorities. Consequently, the effect of trust on the support for the race-targeted redistribution policies increases.

CHAPTER 11

CONCLUSIONS

> Government cannot solve our problems, it can't set our goals, it cannot define our vision. Government cannot eliminate poverty, or provide a bountiful economy, or reduce inflation or save our cities or cure illiteracy or provide energy. And government cannot mandate goodness. Only a true partnership between government and the people can ever hope to reach these goals.
>
> Jimmy Carter's First State of the Union Address

My analysis furthers our understanding of the causes and consequences of political trust, advances research methodology and details measurement of the political trust construct.

Findings

I begin by discussing substantive empirical findings of my research elaborating on the causes and consequences of changing political trust. Then, I focus on the ANES measure of trust and recapitulate what we have learned about the way people conceptualize trust in government. Finally, I conclude by revisiting the methodology my research advances.

The causes and consequences of changing political trust. Trust in the regime has long been a central concept in democratic theories of governance. As David Easton (1965) told us long ago, the legitimacy of the political system depends heavily on the extent to which people trust the government to do what is right most of the time. Most scholars would agree that at least some level of trust is indeed required for a stable democracy.

Not surprisingly, the topic elicited massive research attention in response to the sharp decline in political trust following the social and political unrest of the 1960s and early 1970s in the USA. In the last four decades few other political attitudes have received as much scrutiny as political trust, and the ANES Political Trust scale hence became one of the most frequently used survey measures of political attitudes in general. This attention to trust was for a good reason. Trust has a particularly important place in the American political system. It is a key part in the process of political cooperation between the citizens and elected officials. Trust stabilizes citizens' normative political expectations, promotes public support of the government policies and initiatives and ensures progressive public course of the nation.

It is hence no wonder that a deterioration in political trust that has occurred since mid-1960s has worried not only political scientists, but also policymakers, journalists and even citizens alike. Public opinion scholars have been particularly concerned about the causes and consequences of the changing political trust. In spite of the ever-growing, methodologically sophisticated literature that has accumulated in the last four decades, the topic continues to be one of the most debated areas of the American political science. So, given the research findings here, what conclusions can we draw about political trust? How can we further our understanding of causes and consequences of political trust and the implications of trust for the American political system in general and public opinion in particular? I will recapitulate my empirical findings but also put them into the broader perspective by showing how they can advance our understanding of change in trust throughout the 2nd half of the twentieth century.

I have found solid empirical support for each of my theoretical expectations concerning the causes of cross-time variation in trust and the changing effect of trust on respondents' political attitudes and policy preferences. Turning first to the former, I found consistent evidence that change in the national and media issue agendas plays a key role in the cross-time dynamics of political trust. In-line with the priming theory, I demonstrated that change in the volume of media attention to economic and international affairs and national defense issue domains increases the weight people place on these issues when they judge about the trustworthiness of the government. These priming effects, previously not examined on the time-series cross-sectional data, prove remarkably robust. The pattern found is consistently significant throughout four decades from the 1960s and up until the 2000s.

My findings further our understanding of the relationship between the intensity of the issue coverage in the news media and strength of the produced priming effects. When an issue receives its normal volume of attention in the news media and is not salient for the mass public, it does not produce significant effect on trust. However, increase in the volume of news media attention to an issue increases its salience in the mass public and moderates the effect of perceived issue salience on trust. This asymmetric effect of priming, in turn, helps us understand the causes of the dynamics of trust in the last half-century.

When the economy is in decline, economic issues are highly salient for the public, which increases the negative effect of economic performance on trust. However, when the economy improves, the economic worries in public also lessen. As a result, people do not evaluate the government with economic considerations in mind. Consequently, the effect of improved economic performance—however good it may

be—on political trust is not significant. In other words, when economic performance is strong, people do not evaluate the government with economic considerations in mind. Therefore, even the relatively long and uninterrupted periods of economic prosperity—such as in the 1980s and in the 1990s—are incapable of returning trust to its "Halcion days'" levels of the 1950s and the 1960s.

Although trust increases when people feel an external threat to the nation, these generally short-term spikes in trust can't change the overall declining trend for the same reason. When the external threats decline, people do not evaluate the government with international and defense issues in mind. As a result, "rally round the flag" effects on trust appear insignificant and trust regresses to its previous levels.

My analysis of the news media attention to economic and international and defense issues also shows that the former appear consistently more often on the media stream than the latter and nearly always appear more salient for the public. This state of affairs leads to the declining equilibrium of trust, where the economy consistently pulls political trust down and a lot more infrequent—albeit stronger—rallying effects fail to rebound trust. A classic example is the change in trust following the 1st Gulf War in 1992. Although the rally boosted political trust as well as approval ratings of George H.W. Bush, this effect was not long lasting. A sluggish domestic economy shifted concerns of the public from external threat to economic performance, which caused a rapid amelioration of trust.

In light of this finding, it seems unlikely that political trust will return to its "Halcion day." My analysis shows that the latter would require a unique set of circumstances. Much like in the 1950s-1960s, the national economy needs to be consistently very strong and international and defense issues need to be consistently

salient. Since, historically speaking, the combination of these factors is quite rare, we should not expect the equilibrium of trust to return anywhere close to its pre-1964 levels.

Although this decline in trust does not deteriorate the legitimacy of American political system, its consequences should not be underestimated. My findings demonstrate that change in political trust—and moreover, shifts in the criteria people use to judge about the trustworthiness of the national government—have wide-ranging policy implications. The effect of trust on American public opinion also appears more multi-faceted and complex than it has been considered before.

The effect trust exerts on public political attitudes and policy preferences, is contingent on the considerations people have in mind when they think about the government. This disconfirms the previous theory that shifts in political trust lead to the unconditional increase or decrease in public support for the wide array of the government policies. Instead, my analysis shows that the effects of trust are not consistent over time. Trust exerts a significant effect on respondents' preferences in the policy domains that appear primed in their memory at the time of response. At the same time, it fails to exert an effect on the preferences in the policy domains that are not salient for the respondents at a given moment of time. When the defense and civil-rights issues are not salient for the public, trust fails to exert significant effects on respondents' preferences in these domains. Yet, as the salience of these issue-domains increases, it also increases the effect of trust on the policy preferences attached to these domains. If the found pattern is generalizable, this could mean that when an issue—such as for instance, the climate change or social and economic inequality to name but a few emerging issues—becomes prominent on the news stream and appears salient for

the mass public, the effect of political trust on the preferences in this issue domain would also increase.

Trust is also an important ingredient of presidential feeling thermometer ratings, although its effect is similarly not stationary over time. This effect is consequential on the change in the issue domains primed in respondents' memory—most importantly economic issues—at the time of response. When economic issues are primed in public, trust becomes a much less important ingredient of presidential feeling thermometer ratings.

Thus, my analysis demonstrates the critical import of trust for a wide range of political attitudes and opinions, and policy preferences. It also suggests that the effect of trust is more complicated than it was theorized before, as this effect appears conditional on the considerations people have in mind when they think about the trustworthiness of the government in Washington. The last but not the least, by showing that the effect of trust on political attitudes and policy preferences is variable, my analysis suggests that the list of attitudes and policy preferences trust could affect may actually be longer than researchers presently believe.

In addition, my findings concerning the causal mechanism "at play" during political trust attitude priming also bear theoretical importance. Consistent with my expectations, priming effects of the news media and real-world cues on public judgments about the trustworthiness of the government occur through the change in respondents' national importance judgments and economic evaluations. These mediators significantly carry and also amplify the priming effect of the news media agendas and real-world cues on political trust.

This furthers our understanding of the cognitive mediators at play during the process of priming. It also corroborates the inference model of priming, previously tested only in the laboratory setting. My analysis thus confirms that people indeed are not the "victims of the architecture of their minds" but are capable of making conscious inferences from the content of the news media stream and the available real-world cues.

Taken together, my empirical findings—based on the time-series cross-sectional data—shed additional light on the process of political trust attitude formation and change on both micro- and macro-levels. They also draw implications for the dynamic effect of trust on a variety of political attitudes and policy preferences in public.

How people think about trust in government. A quarter of a century ago, political scientist Henry Brady (1985, 269) reminded us that the "lack of interpersonal comparability of survey responses" was a greatly neglected and "…serious difficulty… largely ignored by social scientists." To the best of my knowledge, my research is the first to examine the longitudinal measurement equivalence of the widely used political trust scale, or any other ANES measure for that matter.

Despite disagreements on precise meaning and measurement of the ANES Political Trust scale the scale has become one of the most frequently used measures of political attitudes in general and is particularly appealing for longitudinal analysis. However, the comprehensive psychometric assessment of this scale has not been performed until now.

My analysis demonstrates that the ANES Trust in Government scale has partial longitudinal threshold equivalence. This means that although the meaning and interpretation of the key scale items remains the same, it nevertheless varies for the

Crooked and especially *Waste* items. This partial equivalence is sufficient to anchor the common meaning of the scale, and still allow for over-time latent mean comparisons. However, the fact that the meaning and interpretation of the *Crooked* and *Waste* items varies over time makes the latent variable approach of the attitude construction—the analytical strategy that my study advances—preferable over the traditional ANES additive method. This additive index has been commonly used in the literature, though it has numerous inherent problems. Most importantly, using summated rating-scales assumes that the observed items are relatively free of measurement error and have a stable meaning over time. In light of my findings, these assumptions are highly questionable.

The latent factor score approach, based on the partial equivalence model, has several key advantages compared to the additive approach. It mitigates the measurement error problem and improves parameter estimates, improves the overall validity of the construct and maximizes the validity of the index for any given time wave of the survey. Importantly, my analytical strategy also accounts for the differential functioning of scale items over time.

Researchers interested in performing the longitudinal analysis of trust may find one more property of the latent factor score approach particularly appealing. Because the factor scores do not have the measurement error, the true intra-class correlation of the latent factor score of political trust is substantially higher than the intra-class correlation of the ANES scale. The latter is due to the fact that ICC formula has the within-group variation in the denominator. This variation includes the measurement error, which attenuates the intra-class correlation coefficient. Thus, using the latent

factor score approach ensures that an analysts deals with the true over-time variability in political trust attitude.

A new methodology to study political trust. To date, most work on priming has occurred in an experimental context. My study, in contrast, explores priming effects outside the laboratory. This strategy increases the external validity of my findings and also puts the analysis of priming effects into a broader perspective on both individual and collective levels. My empirical design explores trust attitude priming in a setting that approximates the real-world context as closely as possible. This increases the generalizability of findings and suggests the avenues for future research.

Importantly, my analytical strategy is also different from the econometric approach, which has dominated political trust research in the last decade. My research demonstrates that along with the macro-level time-series design, TSCS approach may be a promising vehicle for the analysis of priming effects. Substantial cross-time variation in responses to the ANES political attitudes' questions enables one to examine a wide range of the micro- and macro-level sources of this variability.

Bayesian Markov Chain Monte Carlo estimation method also mitigates the problem of insufficient observations on the macro-level. Whereas the maximum likelihood estimation methods require at least 40 clusters to produce reliable estimates, Bayesian estimation allows for accurate estimation of variance components with as few as just 10 clusters. This makes Bayesian framework a particularly appealing method to the analysts working with the TSCS data.

Limitations

Some limitations of my research design and research methodology also need to be addressed.

First and foremost, it is necessary to address the question of selected data. Because the ANES time-series cross-sectional data is collected biannually, my data is much sparser than the quarterly time-series often employed by the students of political trust. Due to this limitation, my design does not account for the short-term swings in political trust. Econometrically minded political scientists might find this limitation critical, but in my view, the advantages of the used methodology outweigh this shortcoming. The fact that found priming effects are consistent and robust over time suggests that the same pattern most likely would reproduce itself on the quarterly or monthly time-series data. It is also worth considering that TSCS approach offers a greater generalizability of findings compared to the macro-level time-series designs and especially to the lab experiments.

Another limitation of my research design is the operationalization of the media priming issue agendas. My measures capture the volume of media attention to the issues, but omit the positivity and negativity of the coverage. While this approach—as I showed before—has been and is being often used in the literature, it nevertheless raises questions about the validity of my measures. I addressed this validity question by computing the correlation between the measures of media attention to the issues and the real-world indicators of the issue national importance. Although by conventional statistical criteria I achieved a moderate effect size of the correlation between the NYT economic news coverage and the Bureau of Labor Statistics' measure of unemployment (.30), it is not clear how to interpret the magnitude of this coefficient in the context of

my research. Given the state of the arts in the literature, we still do not know how closely economic news coverage in the media actually approximates the real-world economic conditions. Nevertheless, the positive relationship between the economic news coverage and unemployment suggests that as unemployment—a key indicator of economic performance—increases, so does the media attention to the domestic economy.

Unfortunately, since I am using NYT coverage of international and defense issues as a sole indicator of the priming issue agendas in this domain, I am unable to address the external validity of the created measure.

Another point to ponder is the period of time over which priming has been occurring. Psychological literature generally operates with the short-term priming effects, ranging anywhere between minutes and days. Public opinion literature relaxes this requirement to weeks and months. My measures account for the cumulative volume of media attention dedicated to economic, and international and defense issues in the year the survey was held. While some might consider this period of time anomalously big to investigate priming effects, I did not find substantial within-year variation in the volume of media attention to these two issues. My pilot research showed that regardless of what period of time I included in the analysis—a month, a quarter or half-year—my substantive conclusions would remain the same.

Finally, my analysis only addressed the effect of two issues on public judgments about the trustworthiness of the government in Washington. Although past literature clearly suggests that the variation in the salience of these two issues has the most profound effect on trust, we should nevertheless agree that in real life people are exposed to a lot more issues than just the economy and international affairs and

national defense. Therefore, my analysis—like most research designs—somewhat simplifies the reality.

New directions

My analysis of the longitudinal dynamics of political trust attitude highlights several new, promising research venues.

Future research should advance the conclusion that change in the issue salience primes people to judge about the trustworthiness of the government with the salient considerations in mind. My investigation took into account only two issues—however important they are—responsible for the change in political trust over time. Therefore, the findings put forth here should also be tested by bringing in a broader range of issues, such as crime, energy and environment, social welfare, social security and education, to mention but few. Taking into consideration change in the importance of these issues over time may yield a more nuanced understanding of the dynamics of trust. It might be also worthwhile exploring the priming effect of the shocking events—such as political scandals—on trust using the cross-sectional time-series or panel data. In addition, exploring the geographical variation in trust might also yield promising results.

Exploring the effect of different moderators of priming on the micro- and macro-levels might also produce important findings. On the individual level, future research might focus on the moderation effects of partisanship, ideological standing and political sophistication. On the macro-level, researchers may further explore the moderating effects of different issue types and media and especially non-media outlets on political trust.

A particularly promising venue for future research might be further analysis of the relationship between political trust and a wide range of respondents' attitudes and positions on issues. It might be worthwhile investigating the temporal effect of trust on respondents' standing on the liberal-conservative scale, position on moral issues—such as euthanasia, abortions, same-sex marriages, and illegal immigration, as well on the emerging issues—such as environment, climate change and healthcare reform.

Apart from this, researchers might further search for alternative data sources to further explore the effect of the issue priming on public judgments about the trustworthiness of the government. Panel data and tracking polls, which include the question(s) on political trust, may provide a better insight into the short-term variation in political trust on the micro- and macro-levels.

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APPENDICES

Appendix A. Survey Marginals' of the Trust in Government Index: 1958-2010

#	Polling organization	Release / field word date	Trust (%)
1	NYT/CBS	26-Oct-10	25
2	ANES	01-Jun-10 – 01-Jul-10	22
3	CNN/ORC	09-Feb-10	21
4	Pew Research	21-Mar-10	22
5	CNN	15-Feb-10	26
6	CBS/NYT	10-Feb-10	19
7	Gallup	15-Jan-10	19
8	CNN	20-Dec-09	20
9	CBS/NYT	31-Aug-09	23
10	CBS/NYT	16-Jun-09	20
11	CNN	21-Dec-08	25
12	ANES	05-Nov-08 – 30-Dec-08	30
13	CBS/NYT	13-Oct-08	17
14	CBS/NYT	17-Jul-07	24
15	Pew Research	09-Jan-07	31
16	CBS/NYT	08-Oct-06	28
17	CBS/NYT	19-Sep-06	27
18	Pew Research	05-Feb-06	34
19	CBS/NYT	25-Jan-06	32
20	Gallup	08-Jan-06	32
21	CBS/NYT	06-Dec-05	32
22	CBS/NYT	13-Sep-05	29
23	Pew Research	11-Sep-05	31
24	Gallup	19-Jun-05	30
25	ANES	06-Nov-04 – 06-Dec-04	46
26	CBS/NYT	15-Jul-04	40
27	Pew Research	21-Mar-04	36
28	Gallup	26-Oct-03	37
29	CBS/NYT	27-Jul-03	36
30	ANES	15-Oct-02	55
31	CBS/NYT	05-Sep-02	38
32	Gallup	04-Sep-02	46
33	CBS/NYT	16-Jul-02	38
34	Gallup	19-Jun-02	45
35	CBS/NYT	24-Jan-02	46
36	CBS/NYT	10-Dec-01	47
37	CBS/NYT	28-Oct-01	55
38	Gallup	06-Oct-01	60
39	CBS/NYT	17-Jan-01	31
40	CBS/NYT	31-Oct-00	40
41	ANES	07-Nov-00 – 17-Dec-00	44
42	Gallup	09-Jul-00	42
43	ABC/Washington Post	02-Apr-00	30
44	Pew Research	14-Feb-00	40

45	CBS/NYT	04-Oct-99	30
46	CBS/NYT	18-Sep-99	38
47	Pew Research	16-May-99	31
48	Pew Research	21-Feb-99	31
49	ABC/Washington Post	14-Feb-99	32
50	Gallup	08-Feb-99	34
51	CBS/NYT	13-Jan-99	37
52	CBS/NYT	04-Jan-99	34
53	ANES	03-Nov-98 – 30-Dec-98	40
54	Pew Research	15-Nov-98	26
55	CBS/NYT	01-Nov-98	24
56	CBS/NYT	28-Oct-98	26
57	ABC/Washington Post	27-Aug-98	34
58	Pew Research	22-Feb-98	34
59	Gallup	01-Feb-98	39
60	CBS/NYT	25-Jan-98	26
61	ABC/Washington Post	19-Jan-98	31
62	Pew Research	31-Oct-97	39
63	ABC/Washington Post	27-Aug-97	22
64	Gallup	01-Jun-97	32
65	CBS/NYT	17-Jan-97	23
66	CBS/NYT	02-Nov-96	25
67	ANES	06-Nov-96 – 31-Dec-96	33
68	Gallup	12-May-96	26
69	ABC/Washington Post	06-May-96	34
70	ABC/Washington Post	19-Nov-95	25
71	CBS/NYT	09-Aug-95	20
72	Gallup	07-Aug-95	22
73	ABC/Washington Post	19-Mar-95	22
74	CBS/NYT	25-Feb-95	18
75	ANES	08-Nov-94 – 09-Jan-95	22
76	CBS/NYT	01-Nov-94	22
77	ABC/Washington Post	31-Oct-94	20
78	Gallup	06-Jun-94	17
79	Gallup	30-Jan-94	20
80	ABC/Washington Post	23-Jan-94	24
81	Gallup	24-Mar-93	23
82	ABC/Washington Post	17-Jan-93	28
83	CBS/NYT	14-Jan-93	24
84	CBS/NYT	23-Oct-92	22
85	ANES	04-Nov-92 – 13-Jan-93	29
86	Gallup	08-Jun-92	23
87	ABC/Washington Post	20-Oct-91	36
88	CBS/NYT	06-Mar-91	47
89	ABC/Washington Post	04-Mar-91	45
90	ABC/Washington Post	27-Jan-91	46
91	ANES	06-Nov-90 – 21-Jan-91	28
92	CBS/NYT	31-Oct-90	25
93	ABC/Washington Post	09-Sep-90	42
94	ABC/Washington Post	16-Jan-90	39

95	CBS/NYT	29-Jun-89	35
96	CBS/NYT	15-Jan-89	44
97	CBS/NYT	16-Nov-88	44
98	ANES	09-Nov-88 – 24-Jan-89	41
99	ABC/Washington Post	23-Jan-88	40
100	CBS/NYT	22-Oct-87	40
101	ABC/Washington Post	01-Jun-87	48
102	CBS/NYT	01-Mar-87	41
103	CBS/NYT	21-Jan-87	44
104	ABC/Washington Post	18-Jan-87	44
105	ANES	04-Nov-86 – 07-Feb-87	38
106	CBS/NYT	30-Nov-86	49
107	ABC/Washington Post	08-Sep-86	40
108	CBS/NYT	23-Jan-86	42
109	CBS/NYT	10-Nov-85	49
110	ABC/Washington Post	29-Jul-85	38
111	ABC/Washington Post	25-Mar-85	37
112	CBS/NYT	27-Feb-85	46
113	ABC/Washington Post	26-Feb-85	43
114	CBS/NYT	14-Nov-84	47
115	ANES	07-Nov-84 – 25-Jan-85	44
116	ANES	02-Nov-82 – 31-Jan-83	33
117	CBS/NYT	12-Nov-80	39
118	ANES	05-Nov-80 – 07-Feb-81	25
119	CBS/NYT	15-Mar-80	25
120	CBS/NYT	03-Nov-79	29
121	ANES	07-Nov-78 – 25-Jan-79	29
122	CBS/NYT	26-Oct-77	32
123	CBS/NYT	25-Apr-77	35
124	ANES	03-Nov-76 – 30-Jan-77	34
125	CBS/NYT	05-Sep-76	41
126	CBS/NYT	20-Jun-76	34
127	Gallup	01-Mar-76	33
128	CBS/NYT	08-Feb-76	36
129	ANES	05-Nov-74 – 31-Jan-75	36
130	ANES	08-Nov-72 – 13-Feb-73	53
131	ANES	03-Nov-70 – 25-Jan-71	53
132	ANES	06-Nov-68 – 24-Feb-68	61
133	ANES	08-Nov-66 – 31-Jan-67	65
134	ANES	06-Nov-64 – 28-Feb-65	76
135	ANES	04-Nov-58 – 31-Dec-58	73

Response: Sum of the "Just about always" and "Most of the time" answers to the question: "How much of the time do you think you can trust the government in Washington to do what is right?" (ANES standard format; exact wording of questions asked in other surveys varies).

Notes: The date indicates the period when results of the poll were made public. For the ANES survey the entire period of the fieldwork is provided. The exact dates are not available for the 1958 time-series study and 2010 panel recontact study. A mid-point of the ANES fieldwork time frame was used for the Wcalc procedure.

Appendix B. Output of Stimson's Wcalc Procedure

Year	Quarter #	Quarter	Trust (%)
1972	4	Oct-72	49.4
1973	1	Jan-72	45.3
1973	2	Apr-73	43.3
1973	3	Jul-73	42.3
1973	4	Oct-73	41.8
1974	1	Jan-74	35.8
1974	2	Apr-74	33.4
1974	3	Jul-74	32.4
1974	4	Oct-74	32.1
1975	1	Jan-75	31.9
1975	2	Apr-75	31.9
1975	3	Jul-75	31.9
1975	4	Oct-75	31.8
1976	1	Jan-76	31.8
1976	2	Apr-76	33.5
1976	3	Jul-76	33.6
1976	4	Oct-76	32.1
1977	1	Jan-77	32.5
1977	2	Apr-77	32.7
1977	3	Jul-77	32.1
1977	4	Oct-77	30.9
1978	1	Jan-78	28.2
1978	2	Apr-78	27.9
1978	3	Jul-78	27.8
1978	4	Oct-78	27.8
1979	1	Jan-79	27.6
1979	2	Apr-79	26.6
1979	3	Jul-79	26.1
1979	4	Oct-79	25.9
1980	1	Jan-80	24.6
1980	2	Apr-80	26.5
1980	3	Jul-80	27.5
1980	4	Oct-80	30.7
1981	1	Jan-81	30.1
1981	2	Apr-81	29.6
1981	3	Jul-81	29.3
1981	4	Oct-81	29.2
1982	1	Jan-82	29.9
1982	2	Apr-82	34.1
1982	3	Jul-82	36.2
1982	4	Oct-82	37.2
1983	1	Jan-83	37.7
1983	2	Apr-83	38.0
1983	3	Jul-83	38.1
1983	4	Oct-83	38.1
1984	1	Jan-84	38.2
1984	2	Apr-84	38.2

1984	3	Jul-84	38.2
1984	4	Oct-84	41.5
1985	1	Jan-85	42.3
1985	2	Apr-85	42.0
1985	3	Jul-85	41.1
1985	4	Oct-85	43.5
1986	1	Jan-86	40.4
1986	2	Apr-86	40.5
1986	3	Jul-86	41.9
1986	4	Oct-86	43.9
1987	1	Jan-87	42.7
1987	2	Apr-87	40.8
1987	3	Jul-87	39.9
1987	4	Oct-87	38.2
1988	1	Jan-88	40.3
1988	2	Apr-88	40.2
1988	3	Jul-88	40.1
1988	4	Oct-88	40.2
1989	1	Jan-89	40.5
1989	2	Apr-89	35.9
1989	3	Jul-89	34.6
1989	4	Oct-89	34.1
1990	1	Jan-90	33.8
1990	2	Apr-90	36.6
1990	3	Jul-90	41.0
1990	4	Oct-90	31.0
1991	1	Jan-91	41.2
1991	2	Apr-91	43.3
1991	3	Jul-91	42.6
1991	4	Oct-91	39.2
1992	1	Jan-92	33.3
1992	2	Apr-92	30.4
1992	3	Jul-92	26.5
1992	4	Oct-92	23.8
1993	1	Jan-93	23.9
1993	2	Apr-93	23.1
1993	3	Jul-93	22.8
1993	4	Oct-93	22.6
1994	1	Jan-94	21.8
1994	2	Apr-94	19.9
1994	3	Jul-94	20.8
1994	4	Oct-94	20.2
1995	1	Jan-95	19.4
1995	2	Apr-95	19.1
1995	3	Jul-95	19.6
1995	4	Oct-95	23.1
1996	1	Jan-96	23.6
1996	2	Apr-96	30.7
1996	3	Jul-96	29.2
1996	4	Oct-96	28.0

1997	1	Jan-97	25.2
1997	2	Apr-97	24.9
1997	3	Jul-97	23.4
1997	4	Oct-97	27.2
1998	1	Jan-98	28.9
1998	2	Apr-98	32.8
1998	3	Jul-98	35.6
1998	4	Oct-98	29.1
1999	1	Jan-99	31.6
1999	2	Apr-99	30.6
1999	3	Jul-99	33.0
1999	4	Oct-99	36.7
2000	1	Jan-00	36.6
2000	2	Apr-00	34.5
2000	3	Jul-00	36.5
2000	4	Oct-00	37.3
2001	1	Jan-01	32.5
2001	2	Apr-01	43.5
2001	3	Jul-01	47.4
2001	4	Oct-01	47.1
2002	1	Jan-02	44.5
2002	2	Apr-02	39.8
2002	3	Jul-02	37.4
2002	4	Oct-02	42.9
2003	1	Jan-03	43.8
2003	2	Apr-03	44.0
2003	3	Jul-03	37.2
2003	4	Oct-03	34.7
2004	1	Jan-04	34.6
2004	2	Apr-04	34.5
2004	3	Jul-04	36.4
2004	4	Oct-04	37.6
2005	1	Jan-05	37.7
2005	2	Apr-05	32.5
2005	3	Jul-05	29.4
2005	4	Oct-05	27.6
2006	1	Jan-06	29.3
2006	2	Apr-06	30.6
2006	3	Jul-06	28.5
2006	4	Oct-06	27.2
2007	1	Jan-07	26.6
2007	2	Apr-07	26.3
2007	3	Jul-07	24.7
2007	4	Oct-07	21.9
2008	1	Jan-08	20.6
2008	2	Apr-08	20.0
2008	3	Jul-08	19.7
2008	4	Oct-08	18.4
2009	1	Jan-09	18.8
2009	2	Apr-09	18.9

2009	3	Jul-09	20.6
2009	4	Oct-09	11.3
2010	1	Jan-10	14.8
2010	2	Apr-10	16.3
2010	3	Jul-10	16.9
2010	4	Oct-10	17.8

Note: Prior to 1972 only the ANES biannual measures of trust are available

Loading of the indicator(s) of trust into a latent trust variable

#	Source	N (Pew Center database; 1958 – 2010)	Construct Reliability Squared Factor Loading (R^2)	Construct Validity Standardized Factor Loading (λ)
1	ANES	18	0.671	0.819
2	CBS/New York Times	48	0.929	0.964
3	Gallup	17	0.830	0.911
4	ABC/Washington Post	21	0.874	0.935
5	Pew Research	11	0.526	0.725
6	CNN	3	0.570	0.755

Notes: The data comes from the Pew Research Center archive (http://people-press.org/dataarchive/). The estimates are calculated in W-CALC program (Stimson 2008).

Appendix C. Descriptive statistics of the ANES Trust-in-Government Scale Items

Item	ANES Code	Question wording	1968 – 2008 time-series		
			Range	Mean	S.D.
Trust	VCF0604	"How much of the time do you think you can trust the government in Washington to do what is right – just about always, most of the time or only some of the time?" ("none of the time" volunteered)"	0 - 2	1.425	.565
Interest	VCF0605	"Would you say the government is pretty much run by a few big interests looking out for themselves or that it is run for the benefit of all the people?"	0 – 1	.326	.468
Waste	VCF0606	"Do you think that people in the government waste a lot of money we pay in taxes, waste some of it, or don't waste very much of it?"	0 – 2	.341	.521
Crooked	VCF0608	"Do you think that quite a few of the people running the government are (1958-1972: a little) crooked, not very many are, or do you think hardly any of them are crooked (1958-1972: at all)?"	0 – 2	.701	.669

Notes: "None of the time" and "Most of the time" categories in the *"Do What's Right"* item were merged together due to the small number of responses in the first category

Appendix D. Unstandardized Factor Loadings

Year	Interest	Waste	Crooked	Trust
	Configural equivalence			
1964	1.000	0.828	0.857	0.846
	(0.000)	(0.042)	(0.042)	(0.045)
1968	1.000	0.774	0.734	0.843
	(0.000)	(0.049)	(0.047)	(0.051)
1970	1.000	0.731	0.789	0.898
	(0.000)	(0.046)	(0.043)	(0.050)
1972	1.000	0.743	0.809	0.961
	(0.000)	(0.035)	(0.033)	(0.036)
1974	1.000	0.766	0.802	0.891
	(0.000)	(0.044)	(0.039)	(0.042)
1976	1.000	0.761	0.782	0.965
	(0.000)	(0.046)	(0.043)	(0.051)
1978	1.000	0.814	0.751	0.942
	(0.000)	(0.043)	(0.038)	(0.046)
1980	1.000	0.818	0.809	0.908
	(0.000)	(0.060)	(0.054)	(0.067)
1984	1.000	0.688	0.700	0.843
	(0.000)	(0.044)	(0.040)	(0.050)
1988	1.000	0.745	0.800	0.757
	(0.000)	(0.049)	(0.045)	(0.049)
1990	1.000	0.759	0.780	0.698
	(0.000)	(0.042)	(0.040)	(0.042)
1992	1.000	0.848	0.775	0.749
	(0.000)	(0.050)	(0.046)	(0.049)
1994	1.000	0.866	0.876	0.906
	(0.000)	(0.054)	(0.053)	(0.056)
1996	1.000	0.814	0.865	0.844
	(0.000)	(0.054)	(0.056)	(0.059)
1998	1.000	0.978	0.972	1.027
	(0.000)	(0.062)	(0.063)	(0.066)
2000	1.000	0.755	0.900	0.835
	(0.000)	(0.055)	(0.055)	(0.056)
2002	1.000	0.708	0.844	0.858
	(0.000)	(0.050)	(0.050)	(0.054)
2004	1.000	0.638	0.674	0.764
	(0.000)	(0.062)	(0.059)	(0.066)
2008	1.000	0.934	0.750	0.871
	(0.000)	(0.070)	(0.061)	(0.071)
	Full threshold equivalence			
1964-2008	1.000	0.757	0.720	0.858
	(0.000)	(0.034)	(0.031)	(0.039)
	Partial threshold equivalence			
1964-2008	1.000	0.816	0.879	0.909
	(0.000)	(0.035)	(0.041)	(0.039)

Notes: The models are fitted simultaneously for all subsamples in the ANES 1964-2008 sample. All factor loadings are significant at α=0.001 level. Standard errors are in parenthesis. In full and partial equivalence models, unstandardized loadings are the same for all groups.

Appendix E. Standardized factor loadings

Year	Full configural equivalence				Full threshold equivalence				Partial threshold equivalence			
	Interest	Waste	Crooked	Trust	Interest	Waste	Crooked	Trust	Interest	Waste	Crooked	Trust
1964	0.824	0.683	0.706	0.697	0.851	0.669	0.638	0.744	0.805	0.657	0.708	0.732
	(0.027)	(0.025)	(0.025)	(0.025)	(0.026)	(0.020)	(0.018)	(0.020)	(0.025)	(0.020)	(0.025)	(0.021)
1968	0.831	0.644	0.610	0.701	0.834	0.625	0.597	0.724	0.833	0.623	0.604	0.721
	(0.029)	(0.032)	(0.031)	(0.030)	(0.029)	(0.024)	(0.022)	(0.024)	(0.029)	(0.024)	(0.022)	(0.024)
1970	0.819	0.598	0.647	0.736	0.817	0.636	0.632	0.724	0.822	0.615	0.643	0.724
	(0.026)	(0.032)	(0.028)	(0.028)	(0.026)	(0.023)	(0.021)	(0.022)	(0.026)	(0.023)	(0.021)	(0.022)
1972	0.835	0.621	0.675	0.802	0.840	0.678	0.655	0.775	0.851	0.648	0.680	0.765
	(0.021)	(0.025)	(0.021)	(0.019)	(0.020)	(0.019)	(0.016)	(0.016)	(0.021)	(0.019)	(0.017)	(0.016)
1974	0.861	0.659	0.690	0.767	0.868	0.692	0.659	0.765	0.866	0.685	0.670	0.762
	(0.025)	(0.032)	(0.026)	(0.026)	(0.022)	(0.022)	(0.020)	(0.020)	(0.022)	(0.022)	(0.020)	(0.020)
1976	0.793	0.603	0.620	0.765	0.813	0.637	0.588	0.750	0.825	0.602	0.603	0.751
	(0.026)	(0.031)	(0.027)	(0.026)	(0.022)	(0.019)	(0.018)	(0.018)	(0.023)	(0.031)	(0.019)	(0.019)
1978	0.821	0.669	0.669	0.774	0.823	0.696	0.569	0.793	0.809	0.667	0.595	0.804
	(0.025)	(0.029)	(0.025)	(0.025)	(0.021)	(0.019)	(0.017)	(0.018)	(0.021)	(0.029)	(0.018)	(0.019)
1980	0.776	0.634	0.628	0.704	0.757	0.632	0.603	0.747	0.765	0.601	0.618	0.748
	(0.034)	(0.037)	(0.031)	(0.035)	(0.026)	(0.022)	(0.021)	(0.023)	(0.026)	(0.023)	(0.021)	(0.023)
1984	0.815	0.560	0.570	0.687	0.793	0.550	0.566	0.717	0.798	0.537	0.579	0.710
	(0.026)	(0.030)	(0.027)	(0.028)	(0.025)	(0.020)	(0.020)	(0.021)	(0.025)	(0.020)	(0.020)	(0.021)
1988	0.817	0.609	0.654	0.618	0.827	0.590	0.623	0.655	0.824	0.584	0.637	0.651
	(0.029)	(0.031)	(0.026)	(0.030)	(0.026)	(0.020)	(0.019)	(0.021)	(0.026)	(0.020)	(0.020)	(0.021)
1990	0.858	0.651	0.669	0.599	0.838	0.596	0.639	0.704	0.810	0.638	0.644	0.690
	(0.026)	(0.028)	(0.025)	(0.029)	(0.021)	(0.018)	(0.018)	(0.020)	(0.021)	(0.020)	(0.018)	(0.020)
1992	0.794	0.673	0.616	0.595	0.866	0.561	0.599	0.645	0.792	0.627	0.620	0.639
	(0.029)	(0.028)	(0.027)	(0.029)	(0.023)	(0.017)	(0.018)	(0.018)	(0.022)	(0.019)	(0.017)	(0.018)
1994	0.767	0.664	0.672	0.695	0.810	0.589	0.630	0.764	0.741	0.663	0.651	0.745
	(0.031)	(0.029)	(0.031)	(0.031)	(0.024)	(0.019)	(0.019)	(0.022)	(0.024)	(0.022)	(0.019)	(0.021)
1996	0.771	0.627	0.667	0.650	0.805	0.549	0.629	0.717	0.767	0.626	0.631	0.692
	(0.032)	(0.033)	(0.031)	(0.033)	(0.028)	(0.021)	(0.021)	(0.023)	(0.027)	(0.033)	(0.022)	(0.023)
1998	0.700	0.685	0.680	0.719	0.732	0.615	0.661	0.774	0.722	0.631	0.671	0.759
	(0.033)	(0.031)	(0.030)	(0.030)	(0.031)	(0.021)	(0.022)	(0.023)	(0.030)	(0.021)	(0.022)	(0.022)
2000	0.758	0.573	0.683	0.633	0.797	0.569	0.614	0.667	0.784	0.585	0.626	0.655
	(0.031)	(0.033)	(0.029)	(0.030)	(0.030)	(0.021)	(0.020)	(0.022)	(0.030)	(0.022)	(0.021)	(0.022)
2002	0.795	0.563	0.671	0.682	0.793	0.576	0.633	0.708	0.792	0.584	0.646	0.693
	(0.029)	(0.033)	(0.029)	(0.030)	(0.029)	(0.024)	(0.021)	(0.023)	(0.029)	(0.024)	(0.022)	(0.023)
2004	0.828	0.528	0.558	0.632	0.797	0.543	0.573	0.639	0.789	0.539	0.589	0.634
	(0.040)	(0.042)	(0.037)	(0.037)	(0.036)	(0.027)	(0.026)	(0.027)	(0.036)	(0.027)	(0.026)	(0.027)
2008	0.775	0.723	0.581	0.675	0.714	0.657	0.701	0.677	0.711	0.650	0.713	0.672
	(0.038)	(0.037)	(0.036)	(0.037)	(0.029)	(0.024)	(0.027)	(0.025)	(0.029)	(0.024)	(0.028)	(0.025)

Notes: The models are fitted simultaneously for all subsamples in the ANES 1964-2008 sample. All standardized factor loadings are significant at α=0.001. Standard errors are in parenthesis.

Appendix F. Chi-Square Contributions from Each Sample to the Overall Model

Year	Configural equivalence	Full threshold equivalence	Partial threshold Equivalence
1964	21.974	260.335	66.986
1968	13.432	60.645	20.986
1970	1.571	70.961	7.501
1972	0.85	96.398	26.84
1974	4.922	17.647	11.075
1976	11.221	53.918	18.68
1978	0.981	79.615	4.372
1980	6.442	36.163	23.856
1984	4.198	26.852	9.926
1988	17.076	25.667	29.962
1990	0.016	77.032	34.099
1992	7.199	80.928	15.047
1994	5.501	75.696	9.61
1996	9.08	116.305	18.283
1998	14.267	43.207	23.843
2000	11.71	40.254	18.994
2002	6.466	55.796	11.194
2004	27.105	30.96	37.95
2008	16.673	52.336	61.886

Notes: The models are fitted simultaneously using the MGCFA. Higher values of χ^2 statistics indicate the relative badness of fit of a model in each subsample

Appendix G. Descriptive Statistics of the ANES Trust Index and Latent Factor Score Index

		ANES Scale		Grand Mean Centered Scale		Latent Factor Score	
Year	**N**	**Mean**	**S.D.**	**Mean**	**S.D.**	**Mean**	**S.D.**
1958	1401	49.261	23.795	13.849	23.795	-0.005	0.649
1964	1442	51.65	24.82	16.238	24.82	-	-
1966	1265	61.053	31.278	25.641	31.278	-0.378	0.616
1968	1340	45.153	24.154	9.741	24.154	-0.616	0.645
1970	1502	39.196	24.149	3.784	24.149	-0.628	0.660
1972	2275	37.688	24.252	2.276	24.252	-1.14	-0.699
1974	1566	29.27	22.313	-6.142	22.313	-1.154	0.686
1976	2234	30.377	22.7	-5.034	22.7	-1.279	0.748
1978	2280	29.397	22.417	-6.014	22.417	-1.334	-0.643
1980	1594	26.619	20.514	-8.793	20.514	-	-
1982	1387	31.319	22.914	-4.093	22.914	-0.734	0.574
1984	1902	37.615	23.34	2.203	23.34	-	-
1986	1062	46.629	20.073	11.217	20.073	-0.936	0.631
1988	1764	33.824	22.922	-1.588	22.922	-1.291	0.69
1990	1950	29.074	21.982	-6.337	21.982	-1.454	0.697
1992	2244	28.478	20.886	-6.934	20.886	-1.766	0.828
1994	1761	26.043	20.297	-9.369	20.297	-1.101	0.595
1996	1529	31.545	21.591	-3.866	21.591	-0.969	0.725
1998	1274	34.353	23.023	-1.059	23.023	-0.838	0.598
2000	1551	35.982	22.685	0.570	22.685	-0.546	0.568
2002	1344	42.957	23.216	7.545	23.216	-0.748	0.511
2004	1064	36.836	22.142	1.424	22.142	-1.304	0.751
2008	2095	26.339	23.714	-9.073	23.714	-0.993	0.782
1958-2008	37826	35.412	24.539	1.139	24.539	-0.005	0.649

Notes: Certain items measuring trust in government construct are not available for 1958, 1966, 1982 and 1988 the latent factor scores cannot be compute for the respondents in these years. There was no ANES study in 2006.

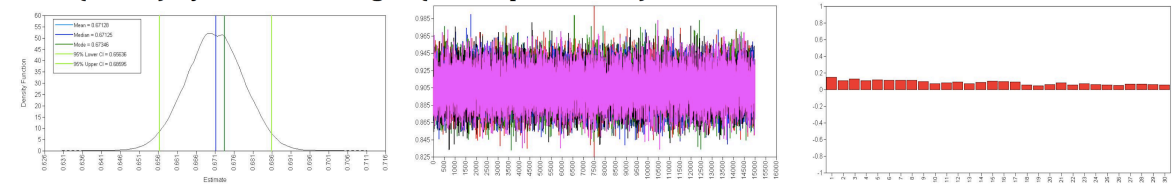
Appendix H. Descriptive statistics of the variables (Chapters 8 and 9)

Variable	N	Mean	Std. Dev.	Min.	Max.
Interest	32896	1.350	0.477	1	2
Waste	33665	1.352	0.527	1	3
Smart	13449	1.522	0.500	1	2
Crooked	31654	1.709	0.671	1	3
Sex	44298	0.441	0.497	0	1
Race	40724	0.129	0.336	0	1
Age	40166	3.548	1.633	1	6
Education	40037	3.771	1.756	1	7
Political Interest	37484	2.051	0.743	1	3
Interest in public affairs	34388	2.812	0.998	1	4
MIP economy	28227	0.317	0.465	0	1
MIP international	28227	0.218	0.413	0	1
Retrospective economy	25055	3.566	1.571	1	5
Party ID: Democrats	39912	0.519	0.500	0	1
Party ID: Independents	39912	0.125	0.331	0	1
Party ID: Republicans	39912	0.356	0.479	0	1
NYT Economic issues' priming	38122	42.879	13.635	25.5	75.7
NYT Economic issues' priming (centered)	38122	0	13.635	-17.4	32.8
NYT International issues'	35485	17.661	15.447	0.9	55.0
NYT International issues' (centered)	35485	0	15.447	-16.8	37.4
Unemployment	40370	5.990	1.331	3.6	9.7
Inflation	40370	4.629	2.797	1.3	13.5
ICS	40370	84.938	12.302	63.8	104.65

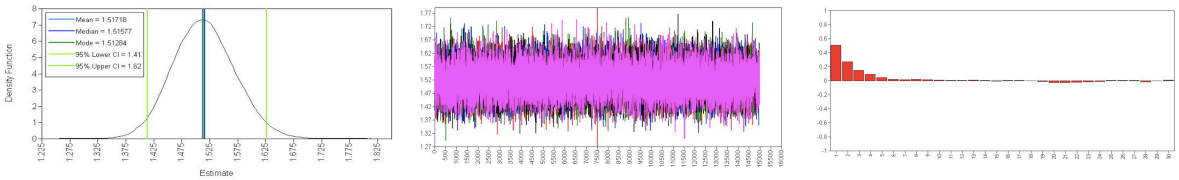
Appendix I. Posterior parameter distribution plot, traceplots and AC plots for model parameters (chapter 8)

Bayesian Posterior Parameter Distributions	Bayesian Posterior Parameter Trace Plots	Bayesian Autocorrelation Plots
Within level parameters		

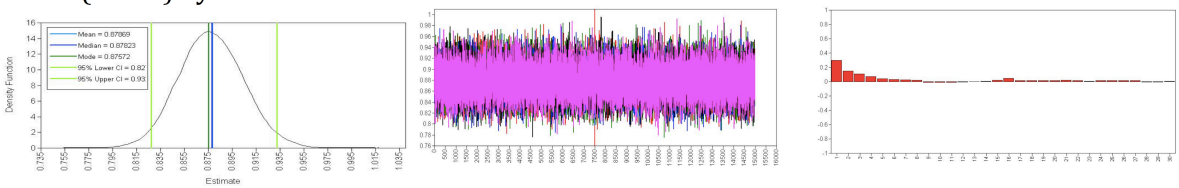
Trust (latent) by Do What's Right (Stdzd. parameter)



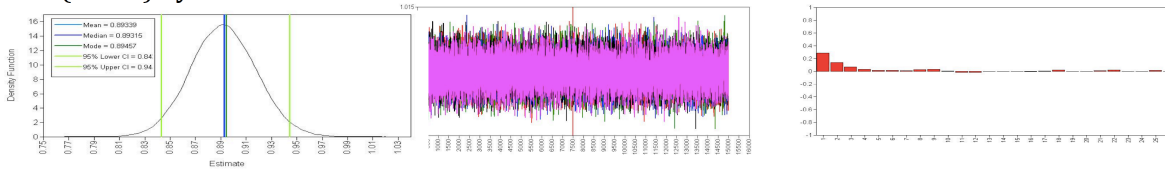
Trust (latent) by Interest



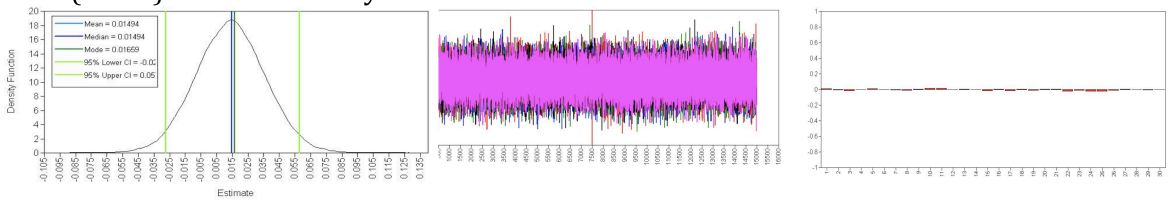
Trust (latent) by waste



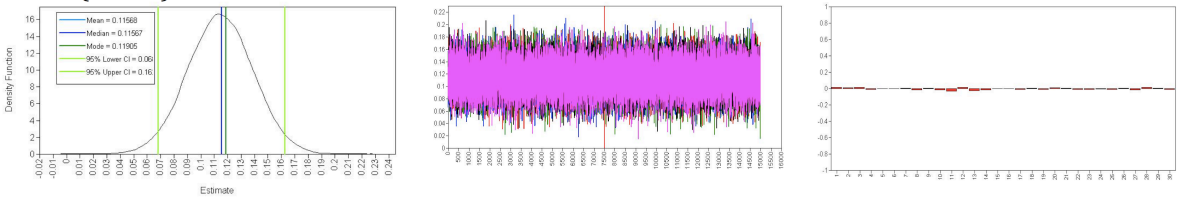
Trust (latent) by crooked



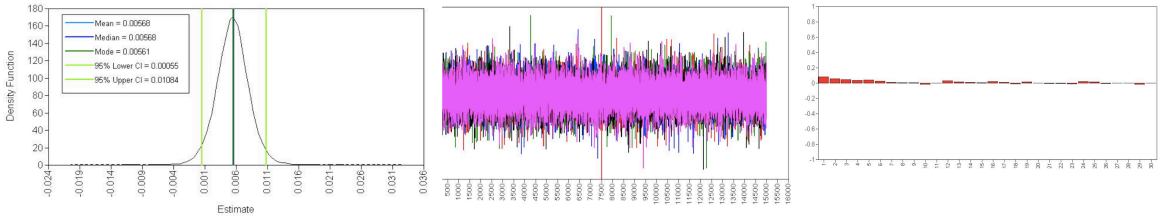
Trust (latent) on MIP Economy



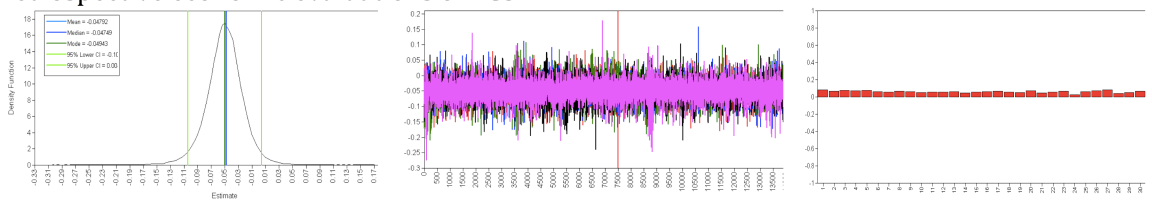
Trust (latent) on MIP International



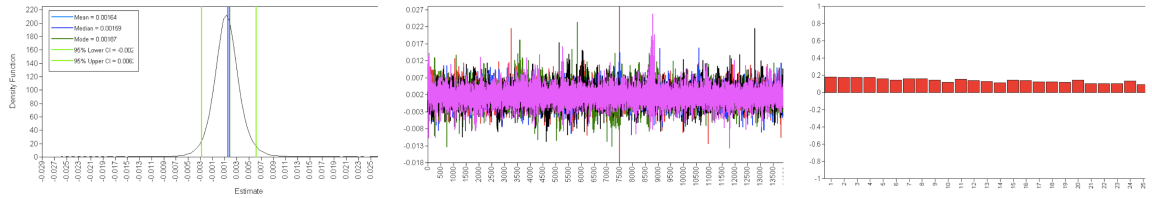
MIP International on NYT International



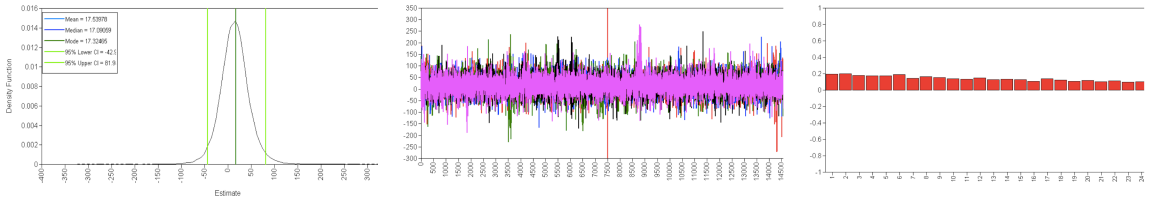
Retrospective economic evaluations on ICS



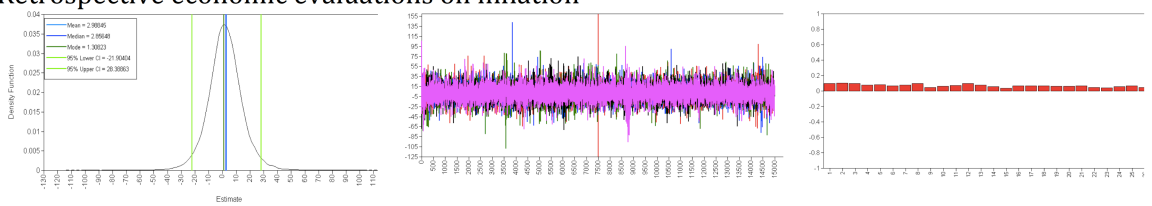
Retrospective economic evaluations on NYT Economy



Retrospective economic evaluations on Unemployment

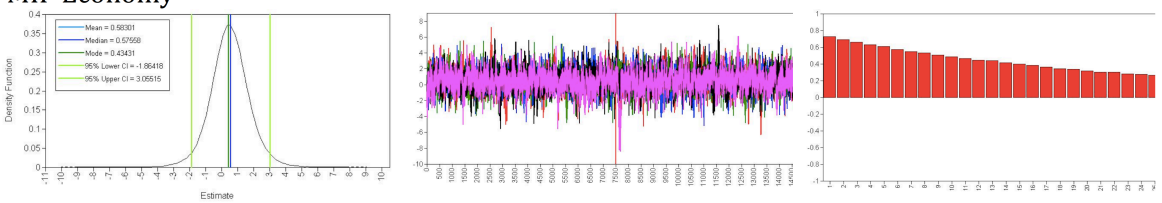


Retrospective economic evaluations on inflation

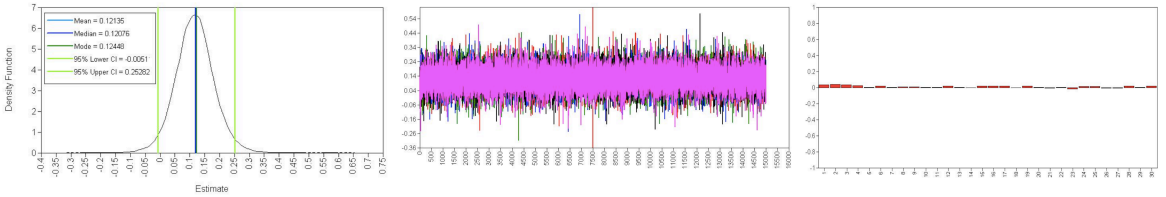


Intercepts

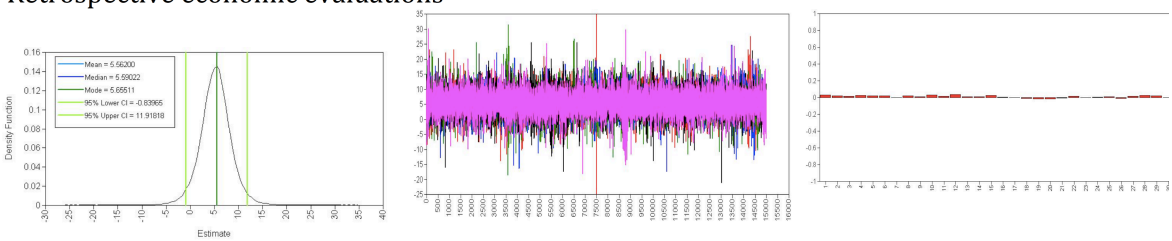
MIP Economy



MIP International

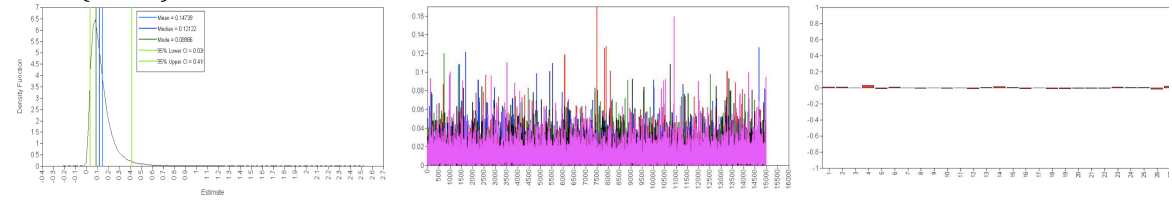


Retrospective economic evaluations

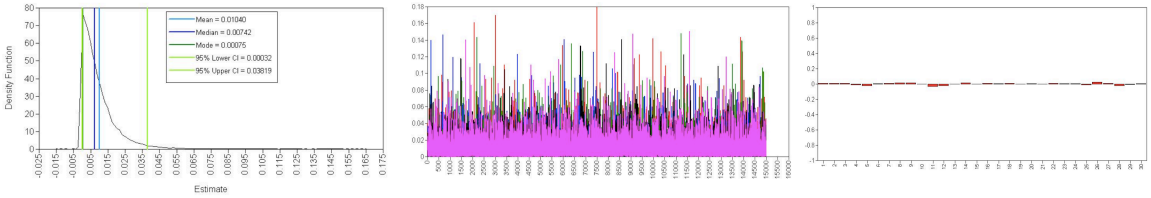


Between-level residual variances

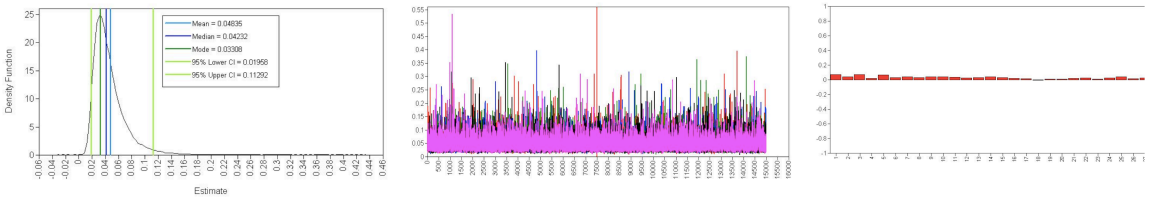
Trust (latent)



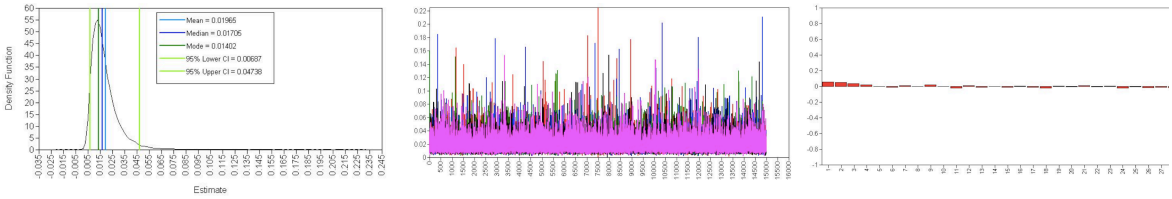
Interest



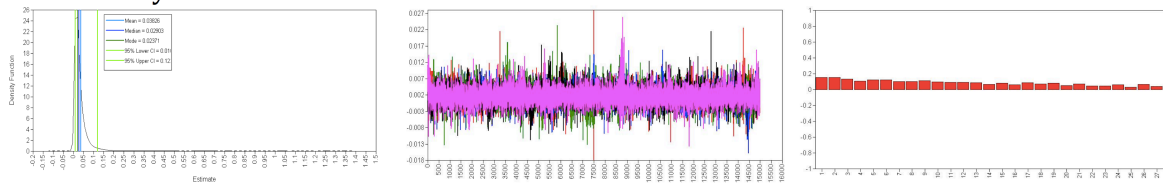
Waste



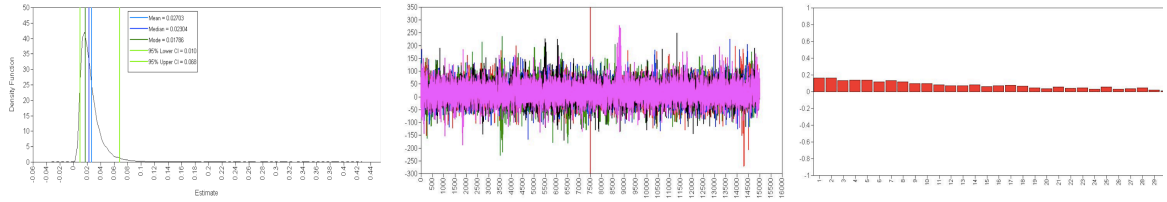
Crooked



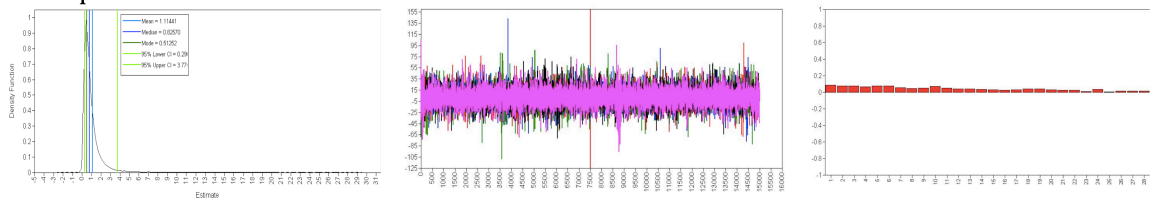
MIP Economy



MIP International

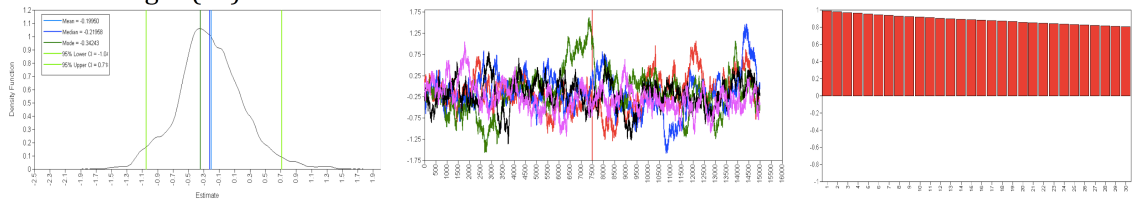


Retrospective Economic Evaluations

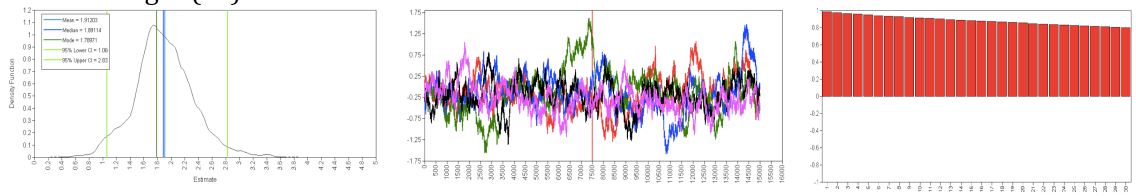


Thresholds

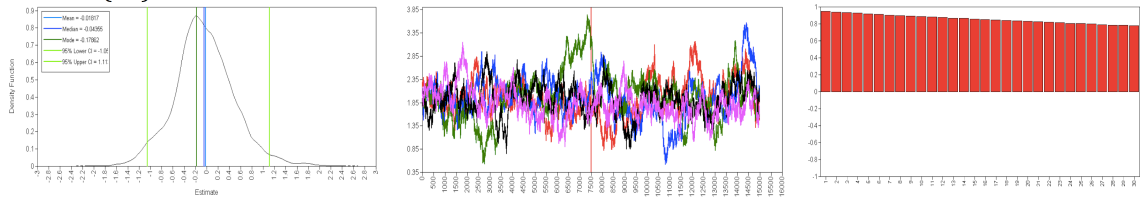
Do what's right ($v1$)



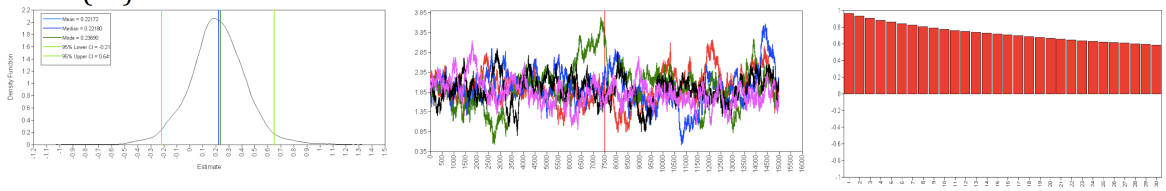
Do what's right ($v2$)



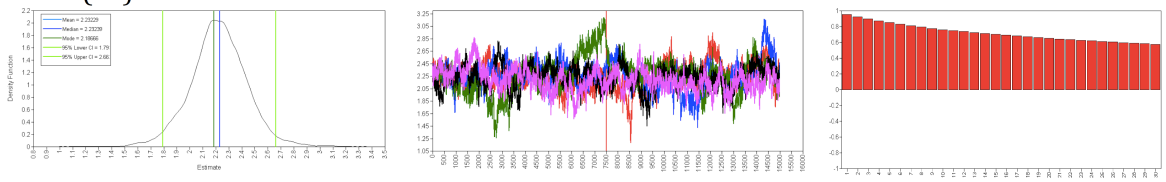
Interest ($v1$)



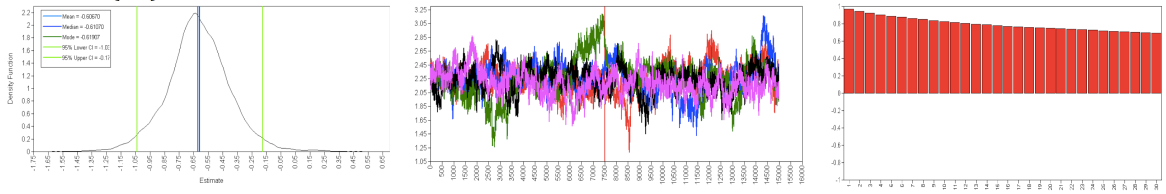
Waste ($v1$)



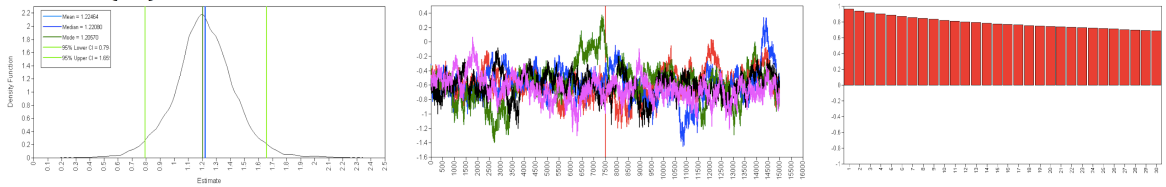
Waste ($v2$)



Crooked ($v1$)

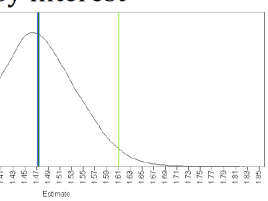
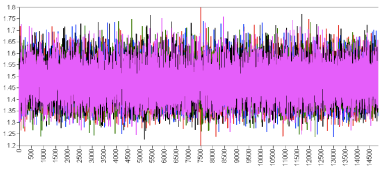
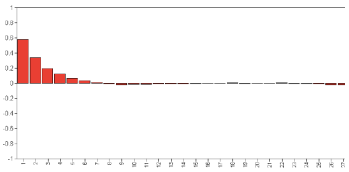
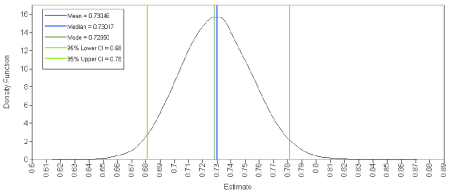
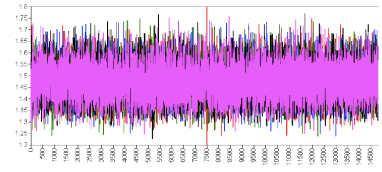
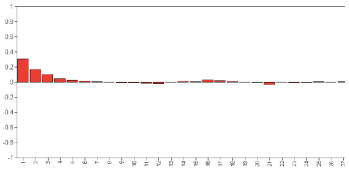
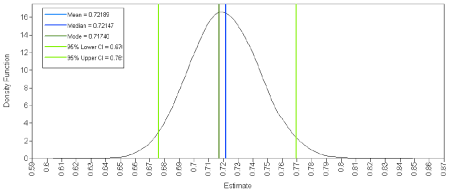
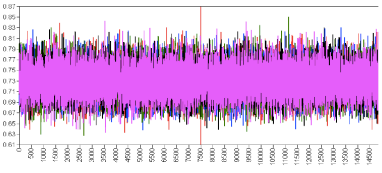
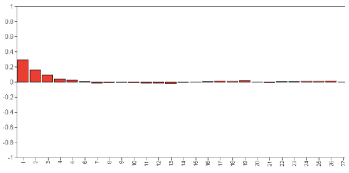
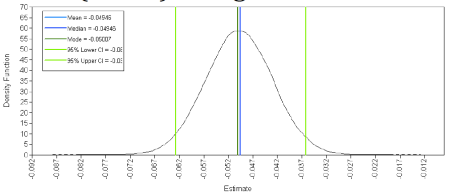
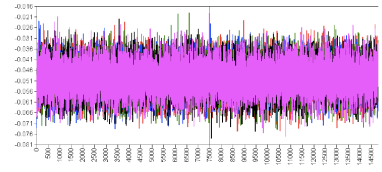
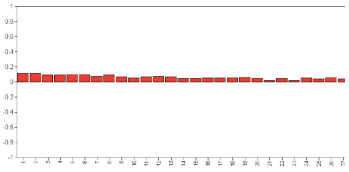
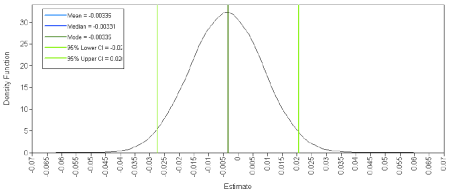
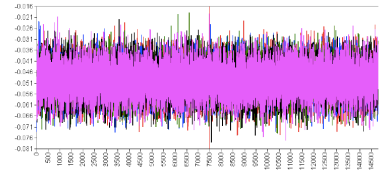
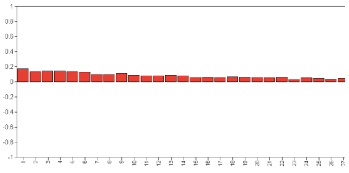
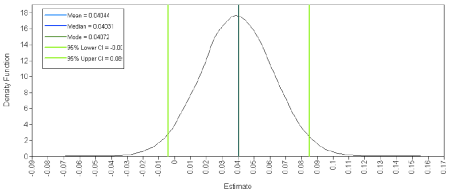
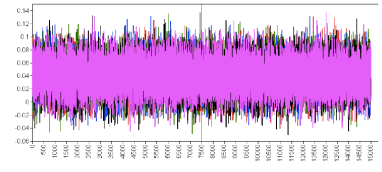
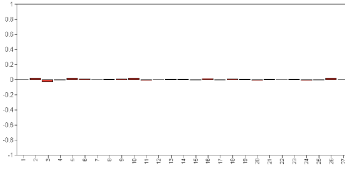


Crooked ($v2$)

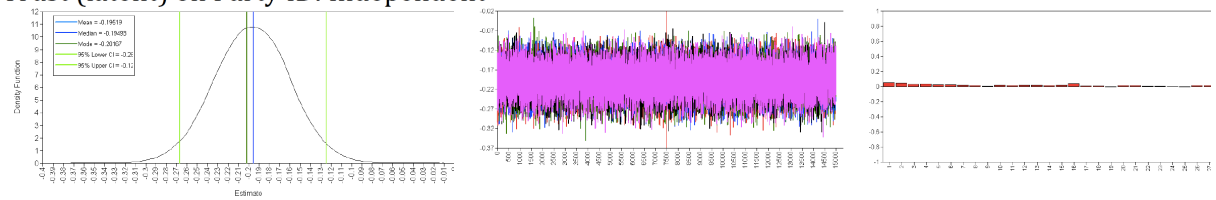


Notes: The plots for the standardized parameters of *Do What is Right* item are reported since unstandardized parameters are fixed to 1 and not estimated. In the traceplots, the first half of the draws were discarded for "burn-in" and the second half shows the remaining draws used for inference. Because the autocorrelation plots are computed for every chain, I only include the graph from the first chain.

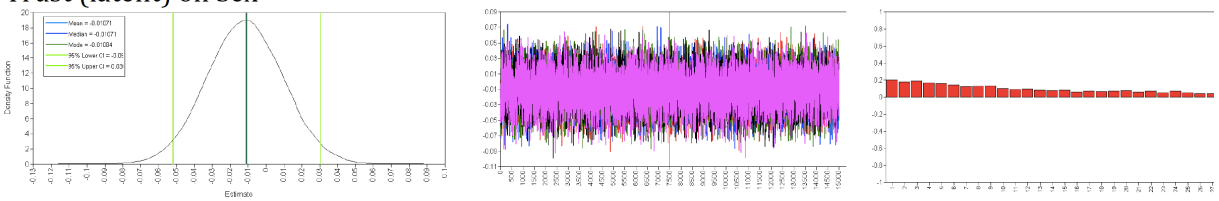
Appendix J. Posterior parameter distribution plot, traceplots and AC plots for model parameters (Chapter 9)

Bayesian Posterior Parameter Distributions	Bayesian Posterior Parameter Trace Plots	Bayesian Autocorrelation plots
Within-level parameters		
Trust (latent) by Interest			
Trust (latent) by Waste			
Trust (latent) by Crooked			
Trust (latent) on Age			
Trust (latent) on Education			
Trust (latent) on Party ID: Democrat			

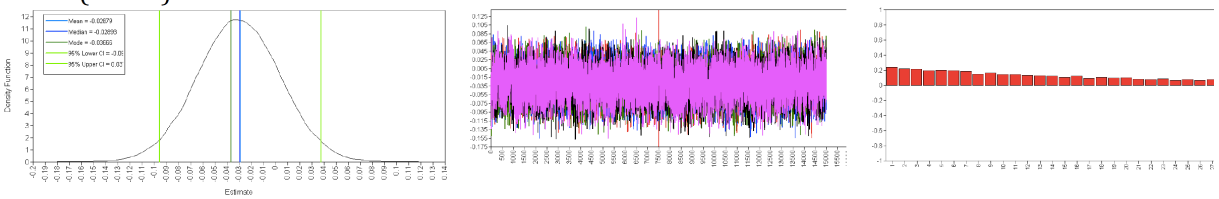
Trust (latent) on Party ID: Independent



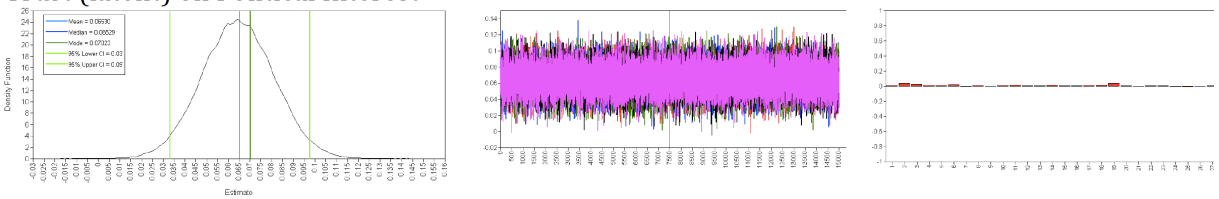
Trust (latent) on Sex



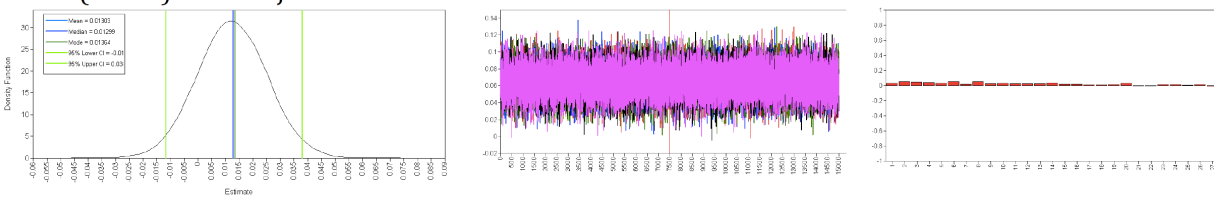
Trust (latent) on Race



Trust (latent) on Political Interest

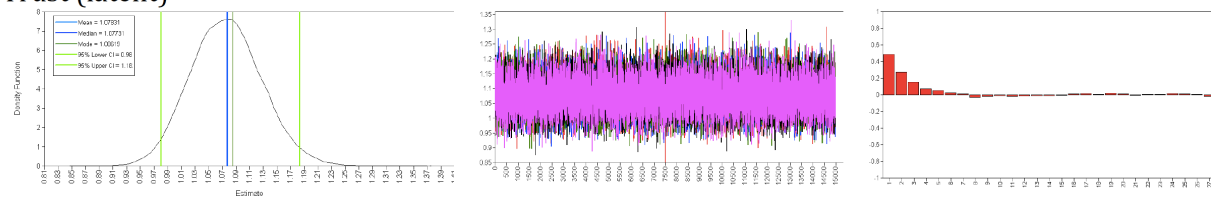


Trust (latent) on Interjest in Pub. Affairs

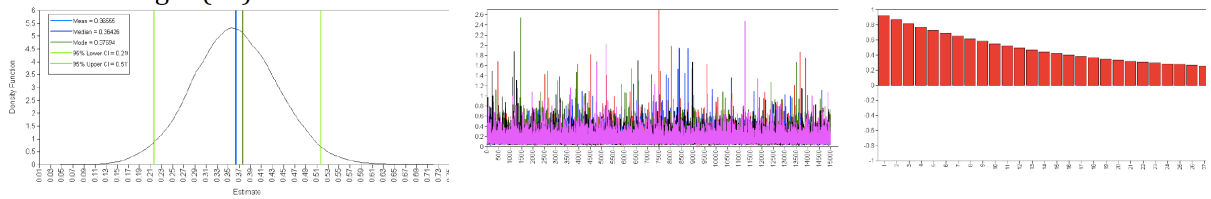


Residual variances

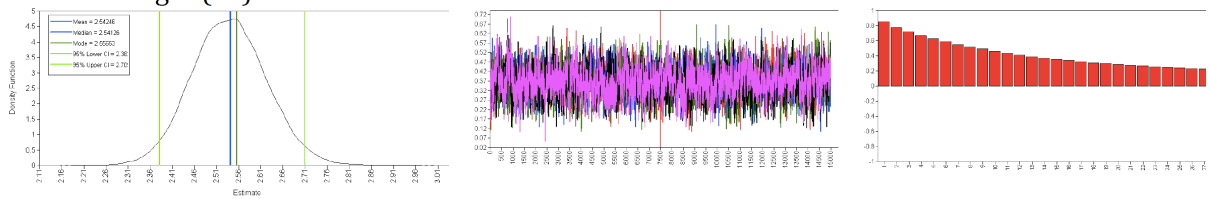
Trust (latent)



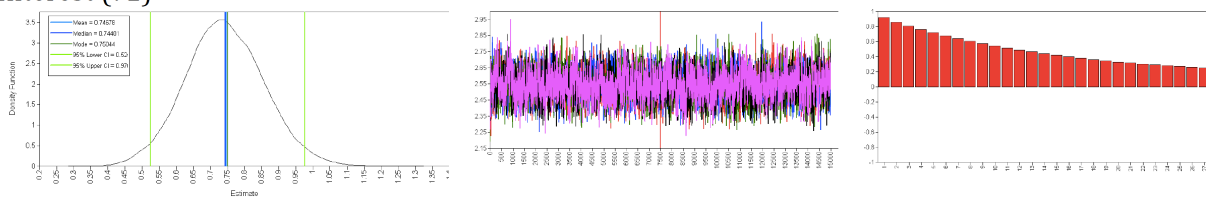
Do What's Right ($v1$)



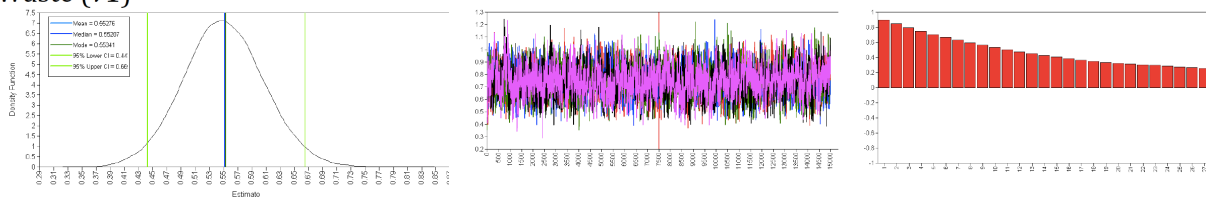
Do What's Right ($v2$)



Interest ($v1$)



Waste ($v1$)



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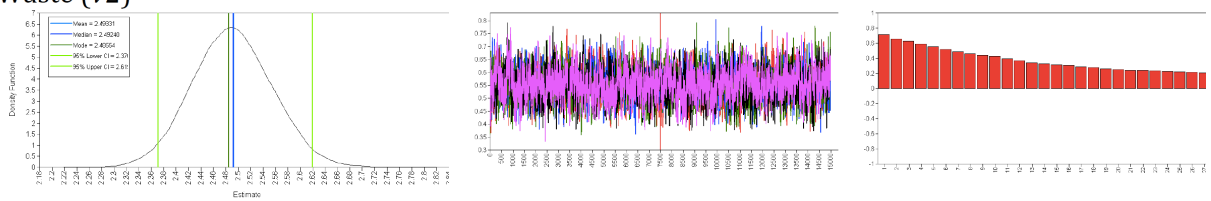
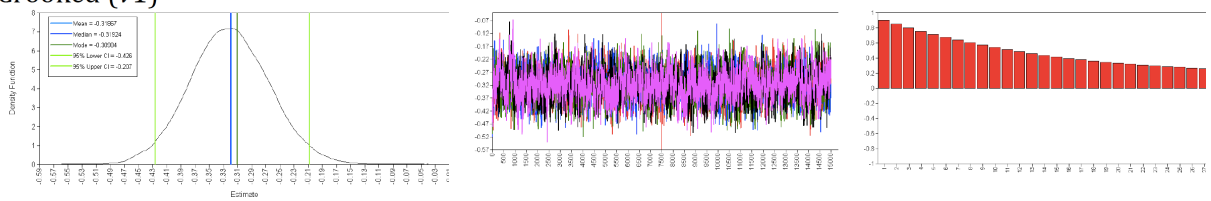
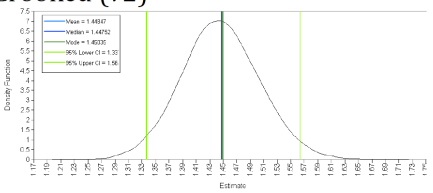
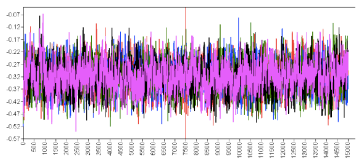
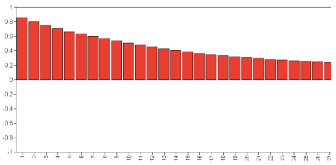


Crooked ($v1$)



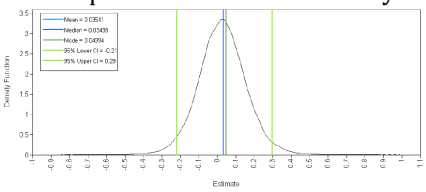
Crooked (*v*2)

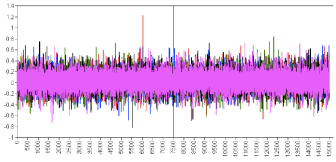
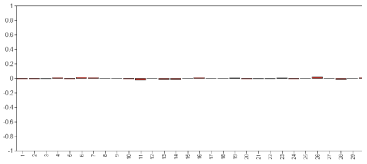


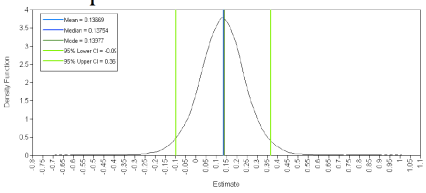
Between-level parameters

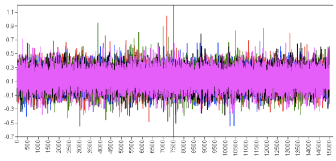
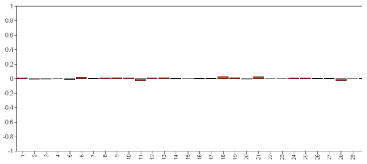
Intercept: Trust on MIP Economy



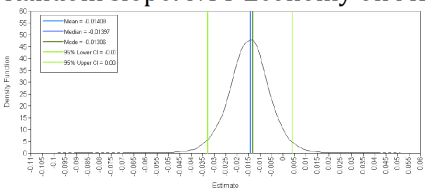



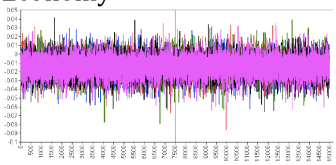
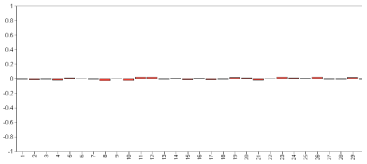
Intercept: Trust on MIP International



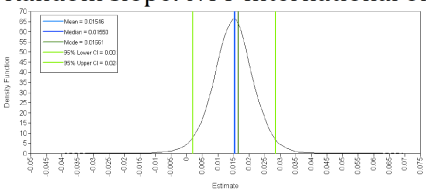



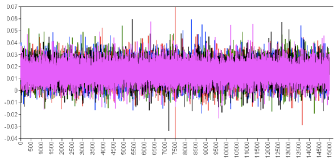
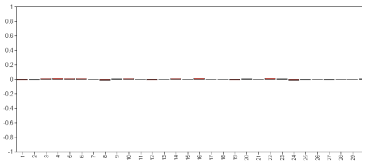
Random slope: NYT Economy on MIP Economy



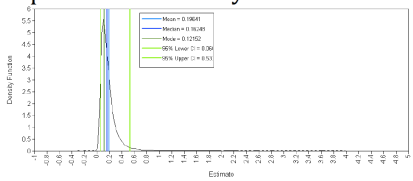
Random slope: NYT International on MIP International

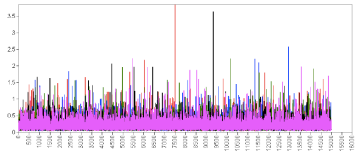
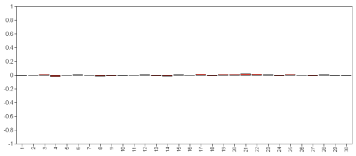


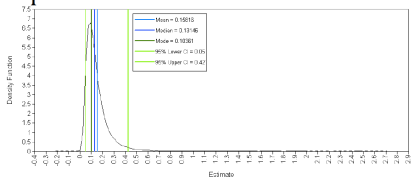
Residual variances

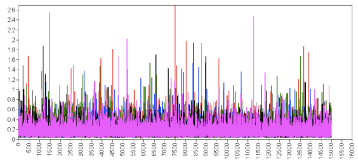
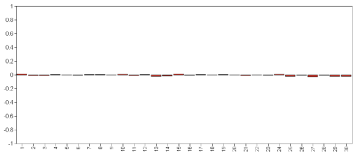
Slope 1: MIP Economy



Slope 2: MIP International



Appendix K. Descriptive statistics of the variables (Chapter 10)

Variable	N	Mean	Std. Dev.	Min.	Max.
President feeling thermometer	36587	0.600	0.288	0	1
Defense spending preferences	22820	0.472	0.283	0	1
Aid to blacks and other minorities	28956	0.424	0.304	0	1
Political Trust	37832	0.354	0.245	0	1
Sex: Man	44298	0.442	0.497	0	1
Race: White	44298	0.800	0.400	0	1
Race: Black	44090	0.120	0.324	0	1
Age	44086	0.513	0.323	0	1
Education	43939	0.484	0.315	0	1
Party ID: Democrat	44298	0.515	0.500	0	1
Party ID: Independent	43663	0.121	0.326	0	1
Region: South	44298	0.351	0.477	0	1
Personal economic evaluations	36357	0.390	0.328	0	1
National economic evaluations	25055	0.642	0.393	0	1
MIP Economy	29280	0.308	0.462	0	1
MIP International	29280	0.232	0.422	0	1
MIP Government functions	29280	0.035	0.184	0	1
MIP Public order	29280	0.127	0.333	0	1
MIP Civil rights	29280	0.030	0.170	0	1
MIP Social welfare	29280	0.235	0.424	0	1
NYT defense issue coverage (centered)	23290	0.000	0.240	-0.422	0.578
NYT welfare issue coverage (centered)	41976	0.000	0.005	-0.005	0.005
Gallup MIP Defense (centered)	40980	0.000	0.137	-0.134	0.326
Gallup MIP Government (centered)	37446	0.000	0.034	-0.036	0.100
Gallup MIP Economy (centered)	37446	0.000	0.192	-0.280	0.434
Gallup MIP International (centered)	41976	0.000	0.085	-0.062	0.357
Gallup MIP Welfare (centered)	44298	0.000	0.027	-0.039	0.050
Gallup MIP Civil rights (centered)	37446	0.000	0.096	-0.091	0.332